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REPORTS

FROM

COMMISSIONERS:

NINE VOLUMES.

— (6.—Part I.) —

HARBOURS OF REFUGE.

Session

3 *February* —— 19 *April* 1859.

VOL. X.—Part I.

1859.

of country in their neighbourhood, and that corresponding feelings have been very keenly excited. We indulge in the hope that all those to whose cordial assistance we have been so much indebted during the prosecution of our inquiry will be influenced both by patriotism and humanity to lay aside such feelings, and to join heartily in promoting those measures which may result from our labours, without which they can meet with but partial success.

We now commend the good work submitted for our inquiry to Your Majesty's most gracious protection, in the firm conviction, that, if fairly carried out in the spirit of our recommendations, it will prove not the least noble of the many works of benevolence which will illustrate the history of Your Majesty's reign.

Witness our hands and seals this 3d day of March 1859.

(Signed) J. HOPE. (L.S.)
J. M. FREDERIC SMITH. (L.S.)
W. S. LINDSAY. (L.S.)
JOHN WASHINGTON. (L.S.)
B. J. SULIVAN. (L.S.)
JAMES VETCH. (L.S.)
JNO. COODE. (L.S.)

FREDERICK JOHN EVANS,
Secretary.

SUPPLEMENTARY REPORT.

TO THE QUEEN'S MOST EXCELLENT MAJESTY.

We, Your Majesty's Commissioners, appointed under the Royal Sign Manual on the fourteenth day of August 1858, and commanded to "complete the inquiry in the "terms recommended in the Report of the Select Committee of the House of Com-"mons on Harbours of Refuge" in the same year, humbly beg leave to make this Supplementary Report, in the execution of Your Majesty's Commands.

We propose herein to describe;—

First, The general forms of section for Breakwaters hitherto adopted, and the forms we should generally recommend;

Secondly, The modes of construction resorted to in existing works, and the new modes of construction that have been proposed to us; and,

Thirdly, The form and extent of the works we have to recommend at the several sites selected in our First Report, together with the rate of progress and probable cost in each case.

Forms of Section.

In order to elucidate the forms hitherto adopted, we have furnished cross sections of the structures at the several Harbours of Refuge now in progress in the Channel, viz., at Alderney, Dover, and Portland, and also of the breakwater at Plymouth. These may be considered as types both of the different forms of section and modes of construction that have been resorted to up to the present time. Plate No. 1.

Breakwater structures have generally been divided into two classes; one, known as the "long-slope" section, of which the Plymouth breakwater may be taken as an example; and the other, the "vertical wall" section, of which form, the new pier at Dover is an illustration; the works at Alderney, and the inner breakwater at Portland, being a combination of the two.

The Plymouth breakwater, as is well known, was of these the first in order of time; it consists of a large mass of stone, deposited on the site of the work and exposed to the action of the sea, which, after the occurrence of gales of wind, has caused the surface to assume a certain determinate form, as it always does under such circumstances. In the case of the Plymouth breakwater, an additional mass or foreshore has been placed on the seaward side, in order to diminish the force of the sea upon the inner or main work.

A breakwater of this sectional form is admissible only in those cases where stone is abundant, and where it can be procured in large sizes; the quantity requisite for a given length, and depth of water, being much greater than in any other section. It should be observed, moreover, that the amount of material required for a work of this description, will depend in a very great degree upon the range of tide at the site where it may be adopted. This arises from the fact, that within the limits of the tidal range, the sea invariably disposes of the materials in the form of a long flat slope. In exposed situations this slope is seldom or never of a steeper inclination than five feet horizontal to one foot perpendicular, and sometimes even flatter than this. Under the level of low water spring tides, there is also, under similar circumstances, a flat slope, having generally an inclination of about four or five to one, this extends from low water of lowest tides, down to about twelve or fifteen feet under that level; from this depth to the bottom,—however deep the water,—the inclination is of a much steeper character, varying but slightly from the angle which the same materials would assume if allowed to roll over a bank above water. This arrangement of the materials by the action of the sea, is exemplified in the sections of Alderney, Plymouth, and Portland, and a similar state of things invariably occurs under analagous circumstances.

Although the sea face of the new work at Dover is not strictly vertical, the general character of the section is such that it may be regarded as an illustration of the vertical-wall system. In works of this class the quantity of material employed is assumed to be reduced to a minimum, in which respect they differ essentially from those on the long-slope system; the former has, consequently, been adopted in cases where there is a want of suitable materials in the locality, and the latter where stone of proper quality is abundant.

As we have stated, the breakwater at Alderney, and the inner breakwater at Portland, are instances of the combination of the long-slope and vertical-wall systems. After the description we have just given of these systems, it would seem to be unnecessary to do more than refer to the cross sections, an inspection of which will show all the essential features of the works which they represent.

For many years a great difference of opinion existed among engineers and scientific men, as to the relative advantages and disadvantages of the long-slope and vertical-wall systems of construction, many authorities insisting upon the theory, that in the case of a vertical wall rising from the bottom in deep water, the wave is a simple undulation, and that it would rise up against a vertical face, and act by its statical pressure only; whereas, in the case of the adoption of the long slope, the character of the wave would be so completely and entirely changed, that it would have a considerable amount of progressive motion imparted to it, and consequently great percussive force, the result being, that the whole weight of the mass of water, multiplied by the velocity with which it was moving, would be the measure of the force exerted on the slope.

On the other hand, it has been urged by eminent men, that so far from the sloping form of breakwater creating the force with which the wave rushes up the slope, it is owing to this force of the wave being permitted to expend and exhaust itself, that the effect upon the structure in a horizontal direction is diminished, these authorities asserting that the same force will act wholly like a ram upon the perpendicular wall, tending thereby to overthrow it. Many arguments were advanced in support of these conflicting opinions, especially about the period of the inquiry by the Commission on the proposed Harbour of Refuge in Dover Bay in 1845–6.

Having endeavoured to give, as concisely as possible, the principal arguments advanced in support of both systems by their respective advocates, we should state, that our own views of the *theoretical* part of this subject, are in accordance with the opinions of those, who like the majority of the Commissioners of 1846, approve of the upright wall. We base our opinions upon the now generally admitted conclusion that, even in the heaviest gales, the disturbing effect of the wave is but very slight, at comparatively small depths below the surface, and that the character of the wave in deep water is essentially different from that which it assumes when influenced by the friction which arises from the ground in shallow water. A valuable paper on the subject of waves, by Mr. J. Scott Russell, will be found in the Report of the British Association for the Advancement of Science, for the year 1844. Among other results arrived at by the accurate experiments and observations of that gentleman, it was found, that in comparatively deep water the waves are formed by a movement which is little more than a rising and falling of the particles near the surface, which surface "*oscillates* above and below the level of repose," these are described as "oscillating waves"; whilst in shallow depths, the motion is onward and progressive, consisting of a "translation of the whole mass of fluid from one place to another," the waves in this case are called "waves of translation;" one important law deduced from these observations being, that, as the waves approach the shore they begin to *break* whenever they reach a point where their height becomes about equal to the depth of the water in which they are moving. The Report states that, "at a great distance from the "shore, or where the shores are deep and abrupt, a body floating near the surface is "alternately carried forward and backward by the waves, neither is the water affected "to a great depth; whereas nearer the shore the whole action of the wave is inward, and "the force extends to the bottom of the water."

Whilst these results are in accordance with general experience, it may be well to remark, that the height and character of the wave and the depth of water in which it will break are greatly influenced by the existence of a current or stream, whether tidal or otherwise, as observation and experience have shown, that in those cases where there is a current or stream moving in *opposition to* the direction in which the waves are travelling, their height and force is greatly increased beyond what they would have been had no such current existed; whereas, in the case of a current moving *in the same direction* as the travel of the waves, their height and force is diminished; the character of the waves, and the depths in which they will break, will also be modified by any sudden or material changes in the depth of water, or in the form of the shores, or the bed of a bay or channel, in which they may be moving.

Those who have observed the waves on the coast in the English Channel, or German Ocean, have described them as attaining varying heights, but there is a general agreement to the effect that the height ranges between twelve and fifteen feet in heavy gales of wind. Observation has also shown that, as a general rule, the waves in heavy on-shore gales begin to assume a broken character, and to attain great force on reaching those points where the depth of water becomes reduced to about two or three fathoms, which depth would be about the height of the waves in such gales, thus confirming the conclusions arrived at from the observations and experiments already referred to.

Though the deductions from these careful experiments would appear to be confirmed by general observation, we have been led to the conclusions, which we shall presently describe, almost entirely by the practical results exhibited at those breakwaters, the substructures of which have been formed by a mass of rubble allowed to assume any form that may result from the action of the waves. It is remarkable, and at the same time important to observe, that in all works of this class the seaward slope invariably assumes a distinct change of inclination at some comparatively small depth below low water; this depth being fifteen feet at Alderney, eight to ten feet at Plymouth, and twelve feet at Portland; the same general result is found to exist at Holyhead, Kingstown, and Cherbourg, and, considering the difference in the size and form of the materials employed, and the exposure of the different sites, the uniformity is striking. From these facts the conclusion becomes inevitable, that the scouring action of the heaviest waves will not extend below a depth of twelve to fifteen feet in any ordinarily exposed situation on our coast, or at any rate, that there will be no action sufficient to disturb rough stone of the sizes usually employed in works of this description.

Having regard to these facts, we are of opinion that the section advisable to adopt in many cases will be that which consists of a base formed of rough stone of various sizes, rising from the bottom to the level of twelve or fifteen feet under low water of spring tides, founding thereon a structure of masonry, with a vertical face on the seaward side, extending so far above high-water mark as may be considered advisable under the circumstances. This masonry need not extend through the whole breadth of the work, but may be backed up with rough rubble stone, in order to give sufficient weight to the structure, the face on the harbour side being finished in any manner that may be considered expedient, having reference to the requirements of each particular case. Although the first cost of a work in the form of section here described, may be somewhat greater than that of one in which the masonry is founded on a rubble mound at the level of low water, we conceive that it would be less exposed to damage from heavy seas, inasmuch as the base would not reach so near to the surface as to cause the waves to assume a forward or progressive motion, even in the heaviest gales, and the work would consequently not be exposed to the heavy impact due to waves of "translation."

It would manifestly be injudicious to attempt to devise any particular form of section which should be applicable to all cases; we therefore wish to direct attention to the opinion that the form just described is that which we believe to be advisable in the majority of instances; but not invariably so, inasmuch as the particular circumstances of each locality must always have an important bearing upon the decision in this respect. The entire absence of suitable materials in the vicinity of a selected site would probably render that form most eligible which should be strictly on the vertical-wall system, the masonry rising directly from the bottom. On the other hand, there may be cases with an abundance of stone in the immediate vicinity, well adapted for the formation of a rough rubble mound, but not suitable for masonry purposes.

At present there is an experiment being made at Portland, to which we think it necessary to refer. In the case of the outer or detached breakwater now in course of execution there, it has been found that the form of the rough rubble mound, after having been exposed for a time, and adjusted by the action of heavy seas, arrives at a state of rest, and the result of the experience of the last few years has been so satisfactory, that the construction of all masonry work upon the rubble substructure has been postponed, in the hope that any further disturbance of the materials will be so slight as to be practically of no moment, thus rendering a superstructure of masonry unnecessary, so far as its use as a simple breakwater is concerned; but upon the inner breakwater, which is connected with the shore, and will be used for the purpose of coaling steamers, the case is different, and accordingly a superstructure of masonry has been erected upon the rubble mound, as will be seen in Plate No. 1. The fixed character of the mound, as it now stands in the outer breakwater, is owing to the supply of rough materials being maintained until the sea has formed the surface to the slopes indicated. Attention is also given to the admixture of the due proportion of several sizes of stone, in order to leave as little vacant space as possible. As a result arising from the rough character of the surface, the waves striking upon the seaward slope are broken up in detail, and there is consequently no body of water to recoil and disturb the stone when receding.

At the time when the "vertical wall" was proposed for adoption, it was stated that any departure from the system previously resorted to would be "a retrograde step in the path of science," and it may possibly now be remarked that the formation of a breakwater by means of a simple mound of rubble, without masonry of any kind, is an unscientific mode of proceeding; but we conceive, however, that course of action to be preferable, and truly "in the path of science," which effectually takes advantage of natural laws to accomplish the object in view, provided it be not attended with countervailing disadvantages. Should further experience confirm the success of the trial, it must necessarily have an important bearing upon the economy of works at those sites where the materials may be suitable and abundant.

MODES OF CONSTRUCTION.

Proceeding to the different modes of construction in the order laid down, we have first, the Plymouth breakwater. In this case the stone was taken in its rough state, and transported from the quarries to the site of the work by means of vessels built specially for the purpose. When the stone was deposited on the intended line of work, and the sea allowed to dispose of the materials, the result was the form indicated by the cross section at Plate No. 1, the only artificial aid to the determination of this particular form being the deposition of a considerable mass of stone in the form of a benching or foreshore about 60 feet in breadth, which was added on the seaward side after the work had made considerable progress. The top, which is about three feet above the level of high water of spring tides, and the slopes, both on the sea and harbour sides, were then "pitched" or paved with blocks of squared stone many tons in weight, and set on edge. In consequence of the scouring action arising from the recoil of the waves during heavy gales, the blocks immediately at the foot of the sea slope have been frequently undermined, and damage has arisen; to obviate this evil, large squared blocks of granite, set on horizontal beds, and dovetailed horizontally and vertically, are being introduced at the bottom of the slope, as indicated by dark shading on the section.

Dover. The new pier or breakwater at Dover is formed by an outer and inner wall built of ashlar masonry, with a course of granite on the face, and blocks of concrete made with Portland cement and shingle in the body or core of the work up to the level of high water, above which the hearting is filled in with liquid concrete. The masonry commences directly from the surface of the chalk which forms the bottom of the bay, the blocks being set below the water by means of diving apparatus. The sea and harbour faces of these walls are not strictly vertical, but have an inclination or batter in steps, of about three inches to the foot. On the sea side there is a parapet, 15 feet above the level of high water, surmounted by a blocking course on the outside, and towards the harbour there is a quay or roadway about 30 feet wide, and 10 feet above high water of ordinary spring tides; the whole of the operations necessary for setting the masonry are carried on from timber staging.

Alderney. The breakwater at Alderney is formed by means of a bank of rubble stone, which is conveyed by a railway from the quarries about three miles distant, then loaded in hopper barges, and discharged on the line of work until it reaches within twelve feet of low water; upon this bank a timber staging is erected, from which the masonry is set. The courses below low water on the sea face are of granite, and the backing of the walls, of concrete blocks made with shingle and Portland cement, as in the case of Dover. The wall on the harbour face is composed entirely of concrete blocks below low water, and above that level, both the sea and harbour walls are formed of large flat rubble masonry; the stone is quarried in the island, and the portion between high and low water is set in cement. At six feet above high water of spring tide, there is a platform or roadway of 25 feet in width. The seaward wall is carried 14 feet higher than this roadway, thus forming a protection against the sea in heavy gales; and this is surmounted by a parapet four feet in height. At the foot of the sea wall, rubble stone is deposited up to the level of low water of ordinary spring tides. All the operations requisite for completing that portion of the work above the level of twelve feet below low water, are performed from the timber staging before referred to.

Portland. The inner breakwater at Portland is formed by a rubble mound, composed of stone of all sizes, from six and eight tons down to small chippings; and this mound is carried up from the bottom to a few feet above the level of high water of spring tides. When it has been washed by heavy seas, a trench is excavated within the body of the mound to the level of low water of spring tides, and a wall of masonry erected. The face course is formed by large ashlar blocks, the body of the wall being of heavy rubble work set in mortar made of blue lias lime and pozzuolana. The ashlar face courses up to about six feet above high water, are of granite, all the remainder of the stone employed being raised in the quarries in Portland. The sea wall is strengthened by counterforts placed twenty feet apart, and an arch being turned between each, a platform is obtained fifteen feet wide, exclusive of footway and parapet. There will be a line of railway both on the upper and lower platforms, for the purpose of conveying coals and general stores to vessels of the navy that may lie alongside the jetties, one of which is now nearly completed. The whole of the operations at Portland are carried on from a timber staging, the rubble stone being conveyed in wagons drawn by locomotive engines, a mode introduced by the late Mr. Rendel, C.E., and in every way attended with success. It should be observed however, that guided by results obtained elsewhere, it was decided when the work was commenced, to keep all the horizontal timbers of the staging not less than twelve feet above high water of the highest tides, and experience has shown that this is necessary to ensure safety.

As we are fully impressed with the great importance of effecting a reduction in the cost of constructing sea-barriers or breakwaters, (the works for which must entail a heavy outlay under the most favourable circumstances,) we have given the most careful consideration to this part of our subject.

Mr. J. Abernethy, C.E.

The mode of construction proposed by Mr. James Abernethy, C.E., was brought under the notice of the Select Committee of the House of Commons on Harbours of Refuge in 1858, and was reported upon by them. It therefore first claimed our attention. Upon referring to that gentleman's evidence before the Committee, it appears that his proposal was to construct "frames formed of creosoted timber, filled in with copper "slag [at the Mumbles] and Aberthaw lime combined," and thus to "form a nucleus "or means of carrying out, should it be found necessary at any future period, a "much more permanent and extensive structure." It was also stated by him that the blocks "would amalgamate" and stand by themselves "after the timber is "decayed."

Mr. Abernethy in his evidence before the Committee described "the present mode of "constructing a breakwater as by the formation of a large rubble mound, to the depth "of 12 feet or thereabouts below low-water mark," with a superstructure of masonry upon it. He objected to this mode of construction, as involving "a great expenditure "of material and time, and consequently of money," and proposed two forms of section for adoption, viz., one for the Mumbles, by forming "a mound of copper slag "to the level of low-water mark," upon which he would construct a "timber frame "formed of creosoted timber filled in with copper slag and Aberthaw lime combined." By the other form of section, he proposed to confine the materials down to the bottom of the sea by means of timber framing. In his evidence before this Commission at Swansea and in London, Mr. Abernethy adopts a different form of section, similar to that shown in Plan III., Report of Select Committee on Harbours of Refuge, 1857.

Report of Select Committee of House of Commons on Harbours of Refuge, 1857, Plan 3.

The proposal to use large composite blocks is not novel; and the peculiar feature suggested by him is in the construction of the timber framing, and its use as forming an essential part of the breakwater. The several operations of fixing the piles, cross ties, wales, and lining to the piles, are described at length in his evidence before us, and by reference to Plate 2 it will be seen that a great portion of this framework is intended to be fixed by divers under low water, and at such levels as would be subject to the tidal flow. This mode of erecting a stage is opposed to some valuable experience obtained in the construction of a pier at Millbay, Plymouth, about twenty years since. In so far, therefore, as respects this particular form of stage or framing, and the purpose it is to serve, which seems to be the novel part of the proposal, we cannot recommend it for adoption, since it would be subject to greater delays from bad weather, whilst it would not be less costly, and certainly more liable to damage from gales, than any method hitherto adopted in a situation exposed to heavy seas in deep water, and these objections would apply most forcibly to those cases where there is a great range of tide, and a strong current.

Commission on Harbour of Refuge in Dover Bay, 1845–6. See evidence of Mr. Rendel, C.E.

Mr. M. Scott, C. E. Plate No. 3.

The form of structure and mode of construction brought under our notice by Mr. Michael Scott, C. E., are in nearly all their leading features the same as those proposed by Mr. Abernethy. The only point of difference which seems to call for remark being, that, in lieu of first driving the piles along the line of work and then fitting the upper timbers, Mr. Scott proposes to construct and complete a certain proportion of timber frames on shore, and to tow them to their positions; these frames to consist of "the standards braced and tied together, and united at the foot by a cross tie." This cross tie he describes as "peculiar, consisting of pieces of timber ranged in the form "and having much the effect of a ship's chain, being flexible to a certain degree." We consider that the proposers, in both cases, underrate the consequences of unequal settlement, and the difficulties of effecting the several operations in deep water and in the open sea, where it may be necessary to construct such works.

As the structure at Blyth, its rate of progress, and the experience gained there, have been frequently and prominently alluded to by these gentlemen, it should be observed that at the time of our visit the works executed at Blyth did not extend beyond low water of spring tides, and it appears that at their extreme end there will not be more than three feet of water at low spring tides. This work therefore, suitable as it appears to be for that site, is very different in character to that necessary for deep-water structures exposed to heavy seas.

With reference to the cost of the structures proposed by these gentlemen, as compared with that of existing works, it is not possible to institute just comparisons throughout, for regard must be had to all the circumstances and conditions of locality; as before stated, there is such a similarity between the proposal of Mr. Abernethy and that of Mr. Scott, that there can be but little practical difference between them in this respect. Mr. Scott enters into some detail in his estimates, as will be seen at page 938 of the Evidence. It will be found, upon adding together the several items of cost given by him for what he terms the "old system," that the amount will be 109*l.* 4*s.* per lineal foot; and on comparing this with the cost as stated by him for his "new system," it appears that the amount will be 124*l.* 11*s.*, showing a difference of 15*l.* 7*s.* per lineal foot or upwards of 81,000*l.* per statute mile, which amount, by his own figures, represents the excess of the cost of the proposed "new system" over the "old system."

With regard to the comparison in the case of what Mr. Scott terms "the Holyhead system," we may remark, in confirmation of what we have already stated as to the fallacy of attempting such comparisons without reference to locality, that the whole question of cost per lineal foot will hinge almost entirely in this case upon the cost of the rubble; for, taking the two examples put forward at page 939, it will be found that in the estimate of what is called the "Holyhead system," the cost of the rubble amounts to sixty per cent. of the whole, whereas in the estimate for the "new system" it amounts to twenty per cent. of the whole.*

Referring to the question of interest, Mr. Scott charges the "old system" (as an example of which he has taken the works at Alderney) with a sum of 145,367*l.*, and the "new system" with 14,411*l.*; for the eleventh year of progress he charges the former, 15,453*l.*, and in the twelfth year *nil*, from which period the charge for interest again continues to increase until the work is finished; upwards of 53,000*l.* being charged under this head during the five last years, notwithstanding that 4,500 feet of the work are assumed to have been completed previously. Divesting these estimates of all charge for interest on either system, the amounts will stand thus:—

		£	
6,000 feet	will cost	750,416	by the new system
Do.	do.	690,920†	by the old system
		£59,496	balance in favour of the old system.

There would thus appear to be a balance of 59,496*l.* in favour of the old system, even though in the new system the timber framing to the value of 216,300*l.* is exposed to the sea from 15 to 20 years, during which period the safety of the structure is dependent upon it, and only 3,117*l.* is allowed for repairs; whilst according to Mr. Scott's tables, the value of the timber staging for the whole length of the former amounts to 118,800*l.*,† and only one half is exposed for 10 years, while 12,960*l.* is charged for repairs.

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* At pages 939–940, Mr. Scott states that the Portland breakwater has cost 150*l.* per foot, exclusive of preliminary expenses, and that the cost of the rubble bank alone is 105*l.* 8*s.* per foot run, exclusive of the quarrying of the stones and preliminary expenses; as these amounts are founded in error we may refer to the Statement in the Appendix No. 43, where the particulars of cost are furnished.

† These amounts of 690,920*l.*, and 118,800*l.* for the "old system" are in excess, the latter by 10,800*l.*, and the former by more than 20,000*l.*, in consequence of Mr. Scott having inadvertently charged it with 6,600 feet of rubble bank and staging, instead of 6,000 feet, the assumed length of the work.

Mr. Calver's Wave Screen.

Of the propositions that have come before us for improvement in construction, that which contains the greatest amount of originality is the "Wave Screen," suggested by Mr. E. K. Calver, R. N. From his great experience and habits of observation, extending over many years, during which he has been occupied on various Admiralty surveys, and from the close study and attention which he has devoted to this subject, we have given to his proposal the consideration it is justly entitled to. The views of the author are fully stated in his evidence, and also in a pamphlet, descriptive of his proposal. A drawing furnished by Mr. Calver will be found on Plate No. 4.

Capt. James Vetch, R.E. p. 158.

The idea of a wave-screen is not novel. We find by the minutes of evidence taken before the Commissioners on Harbours of Refuge in 1844, that it was proposed to shelter the Small Downs by an "iron screen," with a view of offering "no more obstruction to the " flow of the stream than is necessary to intercept the undulations of the sea."

Mr. Calver describes his structure as "arranged for a low-water depth of 36 feet, " a tidal rise of 15 feet, and a wave of 15 feet. It consists of nine principal parts, " viz.: A. A. and B. B. lower and upper courses; C. and D. lower and upper stays; " E. and F. lower and upper ties; G. and H. lower and upper link bars, and I. the " stay chain. The foot of each stay is furnished with a heavy shoe as K. in " diagram (fitted so as to be perpendicular to the plane of the ground), to be buried " beneath the surface by the action of the tidal current, while the ties are fitted with " moveable flanges to secure the various sections of the screen in their places, and to " provide against irregularities of distance. The materials to be used for the construction " of the screen would be pine scupper-nailed, or pine cased in green heart or wrought-iron " cylinders, for the lower course, and either cast iron or wrought iron cylinders for the " upper course, and the upper half of the longer stays. The ties, flanges, link-bars, " stay-chains, and shoes would be of wrought iron.

"The lower course of piles or cylinders would be driven 10 feet into the ground, " consisting of clay or sand; but in the case of a thin layer of soil over a hard sub- " stratum, then another mode of fixing and securing the lower course would be adopted.

"The diameter of the lower and upper courses being regulated by the depth of water " and weight of sea, would, for a screen in a low-water depth of 36 feet, be 20 inches, " and that of the lower and upper stays 15 inches; the iron of the cylinders would " be at least an inch in thickness."

Several estimates have been laid before us by Mr. Calver, varying greatly in amount, according to the spaces between the piles and the nature of the materials employed. The various estimates for his wave screen, with spaces or intervals between the piles equal to their diameter, are as follows:—

Lower course of pine, scupper nailed, and upper course of cast iron,

		£
Per sea mile - - - -	Mr. Calver,	200,000
Per statute mile - - -	Mr. D. Stevenson,	285,176
Ditto - - -	Mr. Bastow,	239,850
Ditto - - - -	Mr. Casebourne,	255,150

Wrought iron throughout, varying from half-an-inch to three-eighths of an inch in thickness,

		£
Per statute mile - - -	Mr. Bastow,	289,297
Ditto - - -	Mr. Casebourne,	440,807

Other estimates were given in by Mr. Calver, showing larger amounts consequent upon an assumed reduction of the intervals between the piles. Considering the difference in these amounts, and the inexpediency of employing timber for such a work, we have framed an estimate, adopting the dimensions furnished by him, and have assumed the use of *wrought iron throughout*, as being the most durable of the several materials suggested, or applicable to the purpose. With regard to the prices, we have adopted the rates stated in the estimate for work of this class handed in by Mr. Bastow, who is stated by Mr. Calver to have had great experience in works of a similar character. The estimate will then stand as follows:—

WAVE SCREEN, OF WROUGHT IRON THROUGHOUT.

Assumed to be in 6 fathoms at low water, and 15 feet rise of tide.

		£	s.	d.		£	s.	d.
Mr. Bastow's Rates.	Piles, 20 inches diameter, say 80 feet long, 1 inch thick; including covering plates at joints, 8¼ tons each				@ 20*l.* per ton =	165	0	0
	Upper stays, 15 inches diameter, 65 feet long, 1 inch thick; including covering plates at joints, 4¾ tons each				@ 20*l.* per ton =	95	0	0
	Lower stays, 15 inches diameter, 50 feet long, 1 inch thick; including covering plates at joints, 4 tons each				@ 20*l.* per ton =	80	0	0
Mr. Bastow's Weights and Prices.	Screw at foot of cylinder	8	0	0				
	Screw at bottom of stays, No. 2, @ 6*l.* each	12	0	0				
	Wrought-iron shafts for upper and lower connexions of stays, 1*l.* 15*s.* + 17*s.* 6*d.* = 2*l.* 12*s.* 6*d.* each, or for two stays	5	5	0				
	Brackets, caps, standards, concrete, &c. (allowing for difference of intervals)	12	15	11				
		38	0	11	say	38	0	0
	Screwing down piles, fixing stays, &c. (Mr. Bastow estimates the cost at 30*l.* per set, with one stay only), say with two stays, per set, 40*l.*					40	0	0
	Total per set					£418	0	0

	£	£
No. of sets in one sea mile, 1825 @ say,	418	762,850
Contingencies, 10 per cent.		76,285
Total per sea mile		839,135

late No. 5. In Mr. Bastow's plan and estimate of 289,297*l.* per statute mile, he contemplates the introduction of only one stay to each pile, and that the wrought-iron plates should be only half-an-inch and three-eighths of an inch in thickness. In the above estimate we have adopted Mr. Calver's original proposal that the spaces or intervals between the piles should be equal to their diameters, that there should be two stays to each pile, and that the iron plates should be an inch in thickness, which we consider would be necessary to allow for corrosion.

It is well to remark that the addition of ten per cent. for contingencies is moderate for works of this class; and that we have made no addition for damage during progress. Keeping these facts in mind, we conceive that such a work cannot be executed for a less sum than 850,000*l.* per sea mile, and that this amount would be still further increased if the structure were arranged in such a manner as we consider would be necessary to ensure complete stability under all circumstances.

In Mr. Calver's evidence he assumes that one stay would be sufficient; he states in his pamphlet that the shoe at the foot of each stay would be "buried beneath the "surface by the action of the tidal current;" and further, that "the power of resistance "possessed by the screen would greatly outbalance any force which could possibly "be brought against it." In these assumptions we cannot concur with him, as we consider that in ground of such yielding character as would admit of the shoe being buried in the manner described, a sufficient resistance could not be thus obtained; for it would be essential to the safety of the structure that all movement of the piles should be provided against in the most perfect manner, since it will be readily seen that any motion in the piles would necessarily continue to increase in such a ratio as to be attended with serious results.

With regard to the rate of progress, as we should not contemplate the use of any other mode of fixing the structure than that generally known as the "screw-pile" system, we have taken the evidence of Mr. Gibson, who has been for many years the superintending foreman to the "Screw-pile" Company, and adopting the results of his experience, it appears that by commencing at the centre, and working towards either end, it would occupy from eleven to twelve years to complete a sea mile of the wave screen. By dividing the work into two sections, and employing four sets of workmen and apparatus, the time occupied would be from five to six years.

Considering the cost and comparative want of permanency in the character of any material that could be employed in a work of this class, we are of opinion that there are but few, if any, cases that would justify the adoption of this method of construction. A structure of this kind should in no case be undertaken, unless where there might be an extraordinary absence of suitable stone in the vicinity, or an unusual tendency to accumulation of sand or foreign matter within the proposed anchorage. Under a combination of these circumstances sufficient grounds might exist to warrant a trial. It is essential, however, that the bottom along the intended line of work should have a depth of not less than from 10 to 15 feet of compact sand or stiff clay, not only to admit of the insertion of the screws for the piles and stays, but also to give stability to the structure when erected.

It should be remarked, that even if constructed of wrought-iron throughout, a work of this kind would be open to the objection of destructibility in case of attack by an enemy; an objection which must have weight in considering harbours of a national character such as we are called upon to deal with.

Rev. Fredk. Glover's Island Breakwater, and proposed new mode of construction.

The next project brought under our notice was that by the Rev. Fredk. Glover, who proposes to remove the "bars" at the entrance of tidal harbours, by the formation of an island breakwater to seaward, which he would "apply to every case of a river debouching "to the sea," such as "the Tyne, Wexford, and Southwold;" and he adds, "Had "any cases already existed, it would not have been necessary for me to advocate them "here. Of necessity, the doctrine is in a great degree to be considered experimental."

The proposition comes before us, therefore, as a theory unsupported by any practical example.

It is true Mr. Glover called our attention to Wismar, where he states "there was an "island in front of the harbour, and that it then was a good harbour with an entrance "round each end of the island; but that the Danes, being desirous of injuring it, had "connected one end of the island to the mainland, and had thereby greatly injured the "harbour." But it does not appear that he had visited that place; and although requested to furnish distinct evidence of the former and present condition of the harbour, he has not done so, but has made reference to some verbal statements which are conflicting in their character.

We examined Mr. Glover at considerable length, and gave him full opportunity of stating his views upon the application of his proposed plan to particular sites, but he has failed to satisfy us that there are sufficient grounds to warrant our recommending an experiment at the public cost.

A new method of constructing breakwaters has also been put forward by Mr. Glover, which he would substitute for the work now in course of execution at Dover. It is described in his evidence as "a wooden case filled with concreted shingle and chalk." He says "I propose to lay on the bottom of the sea a long framework of a width suited to "the height to which the work was to be erected." The frames to be got down "by loading "them with iron," and put together by divers. Layers of concrete, formed in boxes of a thickness coincident with the balks, and about one foot in thickness, would then be filled in between. "When the first layer was completely filled in, another layer of wood "should be added, and upon that again another layer, and so on, filling in each with "concrete until the whole thing is completed at a height of seventy feet." Mr. Glover states that the decay of the timber "would be of no consequence, because the chalk "would take its place, and be defended from the action of the sea by the bearded "seaweed," with which it would be covered.

Although Mr. Glover has, doubtless, been actuated by a laudable desire to reduce the cost of such works, we are of opinion that his proposal cannot be entertained; inasmuch as he has greatly underrated the expense, as well as the difficulties and delays, that must necessarily arise in fixing large masses of timber framework by means of divers under water. As to the durability of the materials, he assumes, that upon the decay of the timber it would be protected from the action of the sea by the "bearded seaweed" with which he states it would be covered. We need scarcely remark that a structure dependent upon such a protection for its support would be totally unfit to resist the force of the sea in any situation so much exposed as to demand the construction of a breakwater.

Mr. Frow.

Capt. Vetch, R.E.

A project by Mr. Frow has come before us, by which he proposes to convert Yarmouth and Lowestoft Roads into Harbours of Refuge "by means of fascines placed three feet "apart, and anchored into the sand by small stones." It does not appear that the proposition is original, as, in 1844, a member of this Commission communicated to Weale's Quarterly Journal, a paper, the object of which was "to point out the utility of "forming harbours of safety, by converting sunken sandbanks into breakwaters or dry "banks," the mode of dealing with the Goodwin Sands being adduced in illustration of the author's views. It was proposed by him to use fascines, to be retained by a framework of iron rods, in order to insure the most speedy accumulation and permanent retention of the sands.

The locality where Mr. Frow intends to apply his scheme is not within the limits of the inquiry entrusted to us, nor is there any case within those limits where the principle could be applied, even if an experiment were considered expedient.

Floating Breakwaters; Captain Sleigh and Admiral Tayler, C.B.

As respects the subject of "Floating Breakwaters," we have received the evidence of Captain Adderley Sleigh upon a form of breakwater of this kind, proposed by him several years since. Our attention has also been called to a plan for a work of a similar class brought forward by Admiral Tayler, C.B., about the same period. Both these proposals were laid before the Select Committee of the House of Commons on Shipwrecks in 1843; we have duly considered them, but have not discovered in either, sufficient advantages to warrant our recommending an experiment to be made with the public funds. Like all proposals of this class, they are open to serious drawbacks, and more especially to risk of breaking adrift in heavy on-shore gales of wind, and in the event of such a casualty, the consequences must be disastrous to vessels riding under their lee.

Admiral Sir George Sartorius.

A third plan of a floating breakwater has been proposed by Vice Admiral Sir George R. Sartorius. This consists of three parallel lines of buoys placed diagonally, the space between each buoy being about four times its diameter, and the distance between the lines about 30 or 40 yards, each buoy being separately moored with chains and anchors. A floating band of matting, 20 yards wide, is to be extended within the lines of buoys, and to be secured by anchors. A triple line of buoys, of a mile in length, each buoy 16 feet long by 9 feet in diameter, so moored, would require 400 buoys, and if moored with two anchors, as proposed, in a depth of eight fathoms, and with a scope of chain each way equal to three times the depth of water, each buoy would require 50 fathoms in length, or 20,000 fathoms of chain, and 800 anchors for each mile in extent. The experience of the Trinity House shows that chains require to be shifted once in four years, and as the cost of a buoy and chains would be about 250*l.* the expense of material alone without the labour of mooring, would be at the rate of 100,000*l.* a mile.

Independently of the cost and want of durability, we are of opinion that the buoys, even with the addition of the matting, would not reduce the main undulation of the waves, nor is it by any means certain, with spaces between them equal to four times the diameter, that they could reduce the surface sea to any great extent. The buoys, too, if hollow, might, in a dark night, be perforated by an enemy and sunk, or they might be cut adrift.

Our views as to floating breakwaters generally are so completely in accordance with those expressed by the Select Committee on Shipwrecks, 1843, that we cannot do better than quote from the Report of that Committee, stating, at the same time, that we fully concur in the opinion they have given, which is as follows:— "Considering the expense of " constructing and maintaining them in repair, compared with the durability of solid " breakwaters (which should be calculated to endure for ages), your Committee are " of opinion that, whatever may be decided upon as to the formation of Harbours " of Refuge, such national works should possess the most perfect solidity to resist " the force of any sea, afford shelter to the trade, and the great and essential advantage " of having powerful batteries erected on them."

FORM AND EXTENT OF WORKS RECOMMENDED.

WICK.

Plate No. 6.

The works the Commissioners recommend to be constructed in Wick Bay consist of two piers, namely, one proceeding from the south side of the bay, a little retired within the head, and carried across the bay to the extent of 1,600 feet from low-water mark, with a slight curve to seaward, and reaching into seven fathoms at time of low water.

In like manner the north pier commences at a point near the North Head, and so far retired within the same as to be well sheltered; the north pier is also slightly convex seaward, and extending across the bay to the extent of 1,000 feet from low water to the pier head, and terminating in about eight fathoms water, leaving a clear entrance of 500 feet between the pier heads, the depth of the entrance being from seven to eight fathoms.

The structure of the piers is proposed to be of rubble stone, discharged from stagings, into the sea, and so carried up to 12 feet below low-water level, thence upwards by upright walls to the top of the platform and parapet.

Estimated cost of work, 250,000*l.*

The space of water thus enclosed will amount to—

From low-water and upwards		160 acres.
„ the 1-fathom line	ditto	126 „
„ 2-fathom ditto	ditto	106 „
„ 3-fathom ditto	ditto	87 „
„ 5-fathom ditto	ditto	59 „

The rise and fall of tides range from 7½ to 10 feet.

We are of opinion, that in point of economy it is desirable the works proposed should be executed in a period of time not exceeding five years from the commencement of the sea works.

PETERHEAD.

Plate No. 7.

The Commissioners propose to shelter Peterhead Bay by the works shown in red, on the plan. This design contemplates a pier from the south shore at Salter's Point running towards the north-east, for a distance of 720 feet with a depth of 4 fathoms at the outer end; opposite the centre of the bay it is proposed to construct a detached breakwater 2,300 feet long, the north and south ends of this work would be in about 8½ fathoms at low-water of spring tide. Between the north end of this breakwater and the line of 4 fathoms off the north shore of the bay there would be a distance of 700 feet, forming an entrance under the shelter of Keith Inch in northerly and north-easterly gales. The Commissioners consider that this design could be executed for the sum of 300,000*l.*

The materials used in any works at Peterhead would be the granite of the surrounding district: the site from whence the stone would be procured would be Stirling Hill, near Buchan Ness.

We consider that the form of section which it would most probably be found desirable to adopt in this case would be the same as that proposed at Wick, but this point should be determined by the precise character and sizes of the blocks of stone at Stirling Hill, which could be ascertained at a very early stage, and we would recommend that an examination should be made for this purpose before the section be finally decided upon. The time occupied in the execution of these works should not exceed eight years.

The water space thus enclosed at the time of low water would be,—

From the low water line	240 acres.
„ 1 fathom depth and upwards	206 „
„ 2 fathoms „	181 „
„ 3 fathoms „	162 „
„ 4 fathoms „	142 „
„ 5 fathoms „	116 „

LOUGH CARLINGFORD.

Plate No. 8

The channel proposed to be dredged is shown by red tint on the plan; the length will be 3,700 feet, the breadth at bottom 600 feet, and the depth when completed 21 feet at low water of spring tides. The side slopes to be 4 to 1.

From the borings of the bar made by Mr. Hoskyn, R.N., under the superintendence of Mr. Barry Gibbons, C.E., Engineer to the Board of Public Works in Ireland, it appears that fully four-fifths of the bed of the proposed channel consist of clay, the remaining one-fifth seems to be covered with boulder stones, or rock *in situ*. If these stones are loose, and merely lie upon the surface, as the report of the diver would warrant our believing, there is no doubt but that our estimate of 50,000*l.* will be ample to dredge the channel we have proposed. If, however, it should prove on further examination that a portion of this channel is crossed by a ridge of rock, the expense might be increased by a sum of 25,000*l.* in addition. But considering the value of a refuge harbour in this position to the trade of Liverpool and the Irish Sea generally, and

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looking at the long list of casualties to shipping, with loss of life and property, as shown by the Wreck Returns, the Commissioners are unanimously of opinion that the larger sum would be well laid out in dredging the proposed channel, and thus converting Lough Carlingford into a valuable harbour of refuge.

WATERFORD HARBOUR.

Plate No. 9. The channel proposed to be dredged in this case is shown by red tint on the plan; its length will be 8,000 feet, and breadth at bottom 600 feet, and depth not less than 22 feet at low water spring tides. The side slopes to be 4 to 1.

The estimated cost is 50,000*l.*

ST. IVES BAY.

Plate No. 10. The work proposed to be constructed in St. Ives Bay consists of a pier proceeding from the west shore of the bay, at Bamaloose Point, about 700 feet south of St. Ives Head, which furnishes a useful protection to the work.

The first cant of the proposed pier extends in a south by east direction, 2,750 feet from low-water mark, thence in a south-easterly direction 750 feet, and there terminates, in 8½ fathoms water, with a pier head:—Total length 3,500 feet, and which is estimated will cost 400,000*l.*

The great depth of water, so favourable for refuge, has the effect of increasing the *cost* of the work, but which, to some extent, is compensated for by the abundance and cheapness of the materials, close at hand.

The portion of the bay thus enclosed by a line drawn from the pier head to the Carrack Rocks, in a south-west direction, will enclose and shelter a space,—

At time of low water of -	180 acres.
„ 1 fathom and upwards	158 „
„ 3 „ „	130 „
„ 5 „ „	103 „

It is desirable the works proposed should be executed in a period of time not exceeding ten years.

PADSTOW.

Plate No. 11. It is proposed to lower the outer end of Stepper Point, at the entrance of Padstow Harbour, in order to obviate the danger that now arises to vessels which are frequently thrown on the northern point of the "Doom Bar," an extensive and dangerous sand bank which lies on the eastern side of the channel. Vessels attempting to get into Padstow during north-westerly gales, which are the most destructive on this part of the coast, experience great difficulty in clearing the Doom Bar sand, in consequence of the eddying winds which are caused by the peculiar form of the hill at Stepper Point. In order to create a true wind at the entrance of the harbour, a very small portion of this Point has been cut down by the Padstow Harbour Association, and has proved beneficial.

The form and extent of the excavations now proposed are shown on the plan and sections, the cuttings to be carried to the red dotted line Y Z in the first instance; according to the evidence, this can be accomplished for the sum of 20,000*l.*; the materials excavated to be deposited near the point Y.

Should the result prove to be as successful as the evidence would warrant, the lowering of the hill should be carried so much farther towards the south-west as can be accomplished for the further sum of 20,000*l.*, the terminating line to be parallel to that marked Y Z on the plan.

DOUGLAS, ISLE OF MAN.

Plate No. 13. The work proposed to be constructed in Douglas Bay consists of two piers, viz.:—

One proceeding from the Little Head, on the south side, retired 250 yards within the shelter of Douglas Head, and carried across the bay in a northerly direction to a distance of 1,000 feet from low-water mark, with a slight cant at the north end, where it terminates with a pier head, in a depth of five fathoms at time of low water.

Secondly. A north pier, proceeding from the low-water mark of Conister Rock, directed in a line towards the south pier head already mentioned, 380 feet in length, and terminating in five fathoms at low water, and leaving an entrance of 500 feet in the clear between the two pier heads, where the depth is five fathoms at low water.

The space of water thus enclosed of low-water area will be as follows:

Of low-water area - - -	46½ acres.
One fathom and upwards - - -	35 „
Two fathoms and upwards - -	27 „
Three fathoms and upwards - - -	16 „

The harbour space being small in amount, it is important that the upright form of structure should be carried out to the greatest practical extent, in order that the space for shipping be preserved entire.

Estimated cost of work 100,000*l.*

It is desirable the works proposed should be executed in a period of time not exceeding five years.

PEEL BAY, ISLE OF MAN.

The work proposed to be constructed in Peel Bay consists of a single pier, proceeding from the Horse Rock, near the Sally-port of Peel Castle, and extending across the bay in an east by south direction, 500 feet in length, and terminating in 22 feet at time of low water, being in the same direction with a line of pier approved of by the Lords Commissioners of the Admiralty in July 1858. The structure of the pier so proposed to be of an upright form, from the bed of the sea, and in conformity with the section of the work already approved of by the Admiralty. Plate No. 14.

The cost of the work, as proposed, is estimated at 25,000*l.*

The shelter afforded by the proposed work in north-westerly gales, as shown by a line drawn from the pier head to a point marked A on the opposite side of the bay, is as follows:—

Of low-water area - -	28 acres.
„ 1 fathom and upwards - -	14 „
„ 2 ditto ditto - -	5 „

It is desirable the works proposed should be executed in a period of time not exceeding three years.

PORT ERIN, ISLE OF MAN.

The work proposed to be constructed in the bay consists of a single pier, 400 feet in length, proceeding in a north direction from the south shore, at the site shown on the plan, and terminating in about 26 feet at low water. Plate No. 15.

The structure of the pier is proposed to be of an upright form, without a parapet, similar to that recommended for Peel Bay. The cost of the work is estimated at 25,000*l.*

The shelter afforded by the pier in westerly gales, as shown by a line drawn from the pier head to the house marked A on the plan, will be as follows:—

Of low-water area - -	17 acres.
„ 1 fathom and upwards -	11 „
„ 2 „ „	6 „
„ 3 „ „ -	3 „

The work above described will prove a great means of safety to the fishing boats and carrying vessels, but should funds become available at any future time to extend the south pier, and to carry out a pier from the north shore of the bay to meet it, leaving an opening of 500 feet between them, a very complete and serviceable harbour of refuge would be provided for the passing trade under any emergency.

It is desirable that the proposed work should be executed in a period of time not exceeding three years.

RIVER TYNE.

Plate No. 16. Annexed is the design proposed by Mr. Walker and estimated by him to cost 800,000*l.* We consider that the curved form of the piers and the width of entrance shown, require further consideration, and we recommend that no design should be approved which does not carry the pier heads into the depth shown by Mr. Walker, namely, 36 feet at low water of spring tides.

The whole of the contemplated works, including the dredging of a channel through the bar into Shields Harbour of not less than 18 feet in depth at low water of spring tides, and 300 feet in breadth at bottom, to be completed within a period of eight years from the present date.

HARTLEPOOL BAY.

Plate No. 17. In this case the limits within which the sheltering works should be restricted are shown by red dotted lines. Looking at the several statements and opinions which have come before us bearing upon the relative advantages and disadvantages of an open or close harbour in this bay, we feel considerable difficulty in devising a plan which we could regard as final.

The amount to be expended in the construction of this harbour is estimated at 1,000,000*l.* and the work should be completed in ten years.

The space of water enclosed within the red dotted lines amounts to—

Low water area - - - -	1,037 acres.
1 fathom depth and upwards - - -	861 „
2 fathoms „ „ - - -	629 „
3 fathoms „ „ - - -	464 „
4 fathoms „ „ - - -	229 „
5 fathoms „ „ - - - - -	18½ „

The designs for a harbour of refuge in Hartlepool Bay proposed by the late Mr. Rendel, C.E., in 1855, as also by Captain Washington, R.N., Mr. R. W. Jackson, of West Hartlepool, and Mr. W. O. Mossman, of Hartlepool, are shown on Plate No. 18.

FILEY.

Plate No. 19. It is proposed to form the harbour in Filey Bay by constructing a breakwater upon, and extending from the east end of Filey Brigg, which is a ledge of rock that runs half a mile to the south-east or seaward of Filey Point, on the north side of the bay. From near the east end of the Brigg the breakwater turns to the southward, and runs south by east, in from 6 to 6½ fathoms water for a distance of about 4,700 feet; the work would then be directed towards the shore, and terminate by an arm running south-west by west for 2,100 feet, the western end having a depth of about 5½ fathoms at low water of spring tides.

The area enclosed by this work at time of low water, within a line drawn from the breakwater head to Mile Haven, would be as follows:—

From low-water line - - - - - -	963 acres.
„ 1 fathom and upwards to ditto - -	812 „
„ 2 fathoms „ ditto - -	634 „
„ 3 fathoms „ ditto - -	444 „
„ 4 fathoms „ ditto - -	307 „
„ 5 fathoms „ ditto - -	170 „

The materials would be obtained from the cliffs immediately adjoining, lying on the north-west side of Filey Point. These cliffs would supply all, or very nearly all, the materials required for the work.

The form of section most suitable in this case would seem to be that of a rough stone base up to the level of about 15 feet under low water of spring tides, and a structure of masonry, with a vertical face to seaward erected upon it. The estimated cost of this work is 800,000*l.*

The expediency or otherwise of constructing an artificial work along the Brigg, and of having an opening in the breakwater near its east end, should be determined by the result of special observations upon the tides in this part of the bay.

The time to be occupied in the construction of these works should not exceed ten years.

On plate No. 20 we have given a comparative view, on an uniform scale, of the Harbours of Refuge we have recommended, so that their forms and relative areas will be readily seen.

All which we humbly submit for Your Majesty's gracious consideration.

Witness our hands and seals this 15th day of April 1859,

(Signed	J. M. FREDERIC SMITH.	(L.S.)
	W. S. LINDSAY.	(L.S.)
	JOHN WASHINGTON.	(L.S.)
	B. J. SULIVAN.	(L.S.)
	JAMES VETCH.	(L.S.)
	JNO. COODE.	(L.S.)

FREDERICK JOHN EVANS,
Secretary.

The Chairman, REAR-ADMIRAL JAMES HOPE, fully concurred in the substance of this Report, but having left England to assume the Naval Command on the East India and China Station, has been unable to attach his signature to it.

J. M. FREDERIC SMITH.

APPENDIX

TO

REPORTS OF COMMISSIONERS

ON

HARBOURS OF REFUGE.

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SUPPLEME HARBOURS OF REFUGE 1858-9. PLATE Nº 1.

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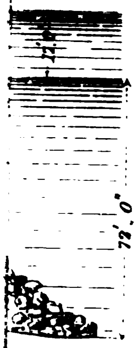

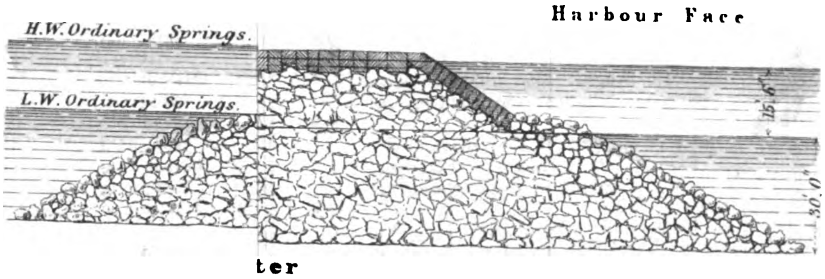

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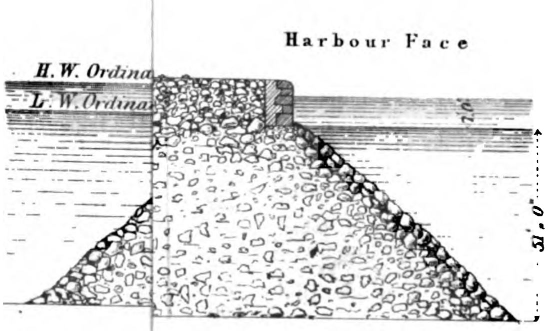

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APPENDIX No. I.

CASUALTY RETURNS

COMPILED UNDER THE DIRECTION OF

THE ROYAL COMMISSIONERS ON HARBOURS OF REFUGE,

1858—59.

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Part III.—Abstracts of Casualty Returns, including a Table showing the Casualties arising from two remarkable gales of wind, one in January 1854, and one in January 1857 - - - - - - - - - - - 196

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The Initials in Column 23, Parts I. and II., have the following meaning; viz. C.G. Officer of Coast Guard, C.C. Collector of Customs, R.W. Receiver of Wreck, M. the Master, and O. the Owner of the Ship.

Collectors of Customs in Scotland are also Receivers of Wreck under the provisions of the Merchant Shipping Act, 1854.

The Letters in Column 22, Parts I. and II., have the following meaning; viz., Dep. denotes that the information is extracted from the Deposition or Statement on Oath made before a Receiver of Wrecks under the 448th Section of the Merchant Shipping Act, 1854, and W.R. that the information is extracted from the Wreck Return forwarded to the Board of Trade by Receivers of Wrecks and Officers of the Customs and Coast Guard.

PREFATORY REMARKS

TO

CASUALTY RETURNS.

FROM the year 1850 to 1854 inclusive, the wrecks and other casualties occurring to vessels in the seas and on the shores of the United Kingdom, were recorded in a Wreck Register kept at the Admiralty, in which the information relative to each wreck and casualty is given in detail, so far as it could be obtained, copies of this register being printed annually for the use of Parliament.

In the year 1854 "The Merchant Shipping Act" transferred this duty to the Board of Trade, conferring increased powers on that Department for the purpose; in consequence of which it is stated, that the returns are now numerically more complete, although it is not understood that as respects the accuracy of the information contained there is any difference between the earlier and the later returns.

The Board of Trade had not printed copies of their register for Parliament, but have furnished instead annual abstracts, in which is given the substance of the information it contains, chiefly in a tabular form, accompanied by a statement relative to various matters of interest connected with the subject of saving life on the coast.

Information of that general description not being adapted to the purpose of the inquiry which the Commissioners had in view, the returns of casualties which follow have been compiled under their directions, and it will be useful to give a brief description of each, in order that their precise object may be clearly understood, and that the authority to which they are entitled should be properly estimated.

In Part I. will be found the casualties, other than those arising from collision, which have taken place in the districts of coast which formed the subject of the inquiry during the years 1856, and 1857, the year 1855 having been omitted in consequence of the returns for that year being considered less accurate than those for the two following years, when the system established by the Board of Trade had got into full working order.

The returns for the Isle of Man, the Coast of Ireland, and the Bristol Channel contain information simply extracted from the Board of Trade Register; those for the coasts of Scotland and England contain some additional information procured at the instance of the Commissioners. It is however necessary to remark here, that the information given in *column* 23 of these two latter returns, is only matter of opinion, and would appear to have been often given with so little care or reflection that it is in some cases of little value, and in others, calculated to mislead.

These returns were compiled by Mr. Gray, of the Marine Department of the Board of Trade, and it will be observed that to the return from each district he has attached a summary, in which much valuable information on leading points connected with the Inquiry is given in a tabular form. The casualties are arranged in the order of the date at which they happened in each district, no reference being had in this respect to the place at which they occurred. This arrangement, though best adapted to the purpose of tracing the effect of any particular gale, and therefore one which could not be dispensed with, is ill suited to the comparison of the amount of casualties occurring at the several parts of the district during a given period.

As such a comparison was essential for the purpose of testing the validity of the claims put forward by the various ports for the construction of harbours in their vicinity, it became necessary to complete from the returns in Part I. those which will be found in Part II., in which the same casualties are arranged from north to south for each district, according to the place at which they occurred. For this purpose the chief ports in the district have in the first instance been selected, and then the remainder of the district has been divided into sections, comprised between its more prominent points.

As observed in the report, a very cursory inspection of these returns will show that a large number of casualties do not bear on the question of Life and Refuge Harbours at all. They have arisen from causes entirely independent of the want of harbours, any number of which would not have prevented them. It therefore became necessary to separate the casualties and loss of life which appear to have arisen from the want of harbours, from those which have not done so, and this has been attempted in the Abstracts contained in Part III., in which the column *stress of weather* contains those casualties and losses of life which bear on the question under inquiry, being all those occurring with the wind at force of 9 and upwards.

On the East Coast of England the losses under the head of Foundering, from causes stated at length in the report, have also a very important bearing upon the question; in other districts this is less the case, though they are not altogether to be disregarded. In compiling these Abstracts the Admiralty returns for 1850–54 have been used as well as those of the Board of Trade for 1856–57, by which means an average of seven years has been obtained. Although this average was the largest which could be obtained from official returns, it will be observed from the notes attached to the abstracts, that in some cases it is not altogether free from objection. It has been endeavoured to meet this difficulty by additional abstracts compiled from the local returns for longer periods of time, furnished at the several ports. They have however proved too incomplete to be of much service in this respect, though generally they would appear to corroborate the conclusions drawn from the official returns.

Finally, an examination of the returns will show, (and in this respect the Admiralty and Board of Trade Returns are alike), that in many cases in which vessels have been lost, there is nothing to indicate whether the loss arose purely from stress of weather or from those other causes in addition pointed out in the report as capable of prevention, and which, therefore, would affect the character of the loss as bearing upon the subject of the inquiry.

The approximate value shown in the Abstract has been obtained from that shown in the Admiralty and Board of Trade Returns when given. In those cases, and they are numerous, in which the value has not been given, one has been estimated from such data as the returns afforded, care being taken to keep it in all cases under the real value.

Annexed to each abstract will be found a few observations drawing attention to those points of the information it contains which appeared to call for special remark.

As a general rule, the ratio which the losses from stress of weather and foundering bear to those arising from all other causes, will indicate the character of the coast, making proper allowance for exceptional cases where such exist.

The following table gives a general view of the casualties and loss of life in the districts under inquiry during the period of seven years before named, and the corresponding annual averages.

The high comparative value of the vessels lost in the Irish and British Channel, and the large loss of life in the former, even excluding that in the ship "Tayleur," will not fail to attract attention, and will amply justify the improvements contemplated at Carlingford and Waterford, and the construction of the harbour at St. Ives, which it is to be hoped will be as useful to the vessels coming down the Irish as to those from the Bristol Channel, by enabling them in bad weather to make more free with the Cornish coast than they now can venture to do.

GENERAL ABSTRACT OF CASUALTIES.

COUNTRIES.	Casualties during 7 Years from 1850–57, excluding 1855.							DISTRICT.	Lives Lost during 7 Years from 1850–57, excluding 1855.				
	From Foundering.	From Wrecks occasioned by		Vessels.		Approximate Value.							
		Stress of Weather.	All other Causes.	Total Lost.	Annual Average.	Total.	Annual Average.		From Foundering.	From Stress of Weather.	All other Causes.	Total.	Annual Average.
IRELAND - - -	- - - Loss of Ship "Tayleur" excluded - - -							N. and E. Coast	18	251	160	429	61$\frac{2}{7}$
						£	£						
SCOTLAND - -	28	144	293	465	66$\frac{3}{7}$	233,731	33,390$\frac{1}{7}$	North East Coast	37	178	43	258	36
ISLE OF MAN - -	12	18	52	82	11$\frac{5}{7}$	51,626	7,375$\frac{1}{7}$	East and West Coasts.	12	21	45	78	11$\frac{1}{7}$
IRELAND* - - -	42	242	389	673	96$\frac{1}{7}$	901,291	128,755$\frac{6}{7}$	North and East Coasts.	18	541	160	710	101$\frac{3}{7}$
ENGLAND - -	86	173	380	639	91$\frac{2}{7}$	499,121	71,303	Bristol Channel	46	210	84	340	48$\frac{4}{7}$
Ditto - - -	86	333	634	1,053	150$\frac{3}{7}$	609,238	87,034	North East Coast	94	330	69	493	70$\frac{3}{7}$
General Total -	254	910	1,748	2,912	415$\frac{6}{7}$	2,205,007	327,858$\frac{1}{7}$	- - - -	207	1,280	401	1,789	255$\frac{4}{7}$

* Loss of Ship "Tayleur" included.

RETURN OF
VESSELS IN DISTRESS
(OTHERWISE THAN BY COLLISION)

ON THE EAST AND NORTH-EAST COASTS OF

SCOTLAND,
FROM ST. ABB'S HEAD TO CAPE WRATH, INCLUDING THE ORKNEY ISLANDS;

IRELAND,
FROM ARRANMORE TO CORK INCLUSIVE, AND ON THE COAST OF ISLAY AND KINTYRE;

THE ISLE OF MAN,

BRISTOL CHANNEL,
FROM ST. DAVID'S HEAD TO THE LAND'S END, INCLUDING THE SCILLY ISLANDS;

EAST COAST OF ENGLAND,
BETWEEN THE FARN ISLANDS AND FLAMBOROUGH HEAD,

During the Years 1856 and 1857.

PART I.—CHRONOLOGICALLY ARRANGED.

COMPILED FOR THE USE OF

THE HARBOURS OF REFUGE COMMISSION,

FROM THE BOARD OF TRADE WRECK REGISTER, AND FROM RETURNS FORWARDED BY RECEIVERS OF WRECK AND OFFICERS OF THE CUSTOMS AND COAST GUARD.

1858-59.

RETURN of VESSELS in DISTRESS on the EAST and NORTH-EAST COASTS OF SCOTLAND, 18

Name, Description, and Age of Ship. 1.	Port of Registry if British. 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo.		Exact Spot where Casualty happened or Distress occurred. 12.
									Ballast. 10.	Cargo. 11.	
(1) Emblem Schooner—70—5. (Age unknown.)	Wisbeach	Boston	-	-	-	-	-	Grangemouth	-	Barley	At Cockenzie from N. end of Inchkeith E.S.E., and from N.E. of Gullness N.W.
(2) Aberdeenshire Steamer—12. (New, not classed.)	Aberdeen	Glasgow	25 Dec. 1855.	11 A.M.	Moderate, and foggy.	1	-	Aberdeen	-	General	At the entrance of new harbour, Fraserburgh.
(3) Storm King Barque—300—12. (15 years.)	Shields	Shields	-	-	-	-	-	Constantinople	-	Coals	Off Flamborough Head.
(4) Annabella Schooner—90—5. (Age unknown.)	Goole	Hartlepool	23 Jan.	-	-	-	-	Grangemouth	-	Coals	N. side of Frith of Forth on Craigmore Rocks.
(5) Origin Sloop—61—4. (28 years.)	Dundee or Stonehaven.	Burntisland	-	-	-	-	-	Aberdeen	-	Iron	Near Island of May and Anstruther.
(6) Name unknown Schooner—76—3. (Age unknown.)	-	-	-	-	-	-	-	-	-	*	4 miles S.E. of Inchkeith.
(7) Catherine Schooner—61—3.	Leith	Leith	10 Feb.	-	Strong breeze	W.	-	Boness	-	Coals	Off Granton
(8) Annie Sloop—33—3 (Age unknown.)	Elie	Newcastle	5 Feb.	3 A.M.	Moderate	W. 4.	High water	Elie	-	Coals	E. of Elie Harbour.
(9) Commercial Packet Sloop—32—3.	Leith	Leith	6 Feb.	11 A.M.	Moderate	S.E.	-	Aberlady	-	Manure	Sands off Aberlady Firth of Forth.
(10) Margaret Schooner—72—5. (10 years)	Grangemouth	Berwick	6 Feb.	-	-	-	-	Coalport	Ballast	-	East coast
(11) Kitty's Wake Sloop—48—2. (5 years.)	Sunderland	Sunderland	-	-	-	-	-	Glasgow	-	General	3 miles E. of the Bass Rock in the Firth of Forth.
(12) Woodside Schooner—51—3. (1½ years)	Newcastle	Powgavie	-	-	Heavy gale	W.S.W.	-	Goole	-	Wheat	Kingwoodie Quay, River Tay, between Powgavie and Dundee.
(13) Brave Sloop—30—3.	Wick	Scrabster	-	-	-	-	-	Port Soy	-	Stone	¾ mile W. of Dunnethead Lighthouse.
(14) Mary Ann Sloop—22—2. (14 years.)	Banff	Banff	13 March	4 A.M.	Moderate	S.	-	Tain	-	Oatmeal	Littleferry outer bank called Gizzen Briggs, entrance to Dornock Firth.
(15) Blue Bonnet Schooner—121—7. (6 Months.)	Leith	Grangemouth	29 March	-	-	-	-	Rotterdam	-	Iron	Chapelness, 1 mile W. of Elie Harbour.
(16) Providence Schooner. (5 years.)	London	Thurso	30 March	-	-	-	-	London	-	Stone	Off St. Abb's Head.
(17) Diana Galliott. (24 years.)	Denmark	Hamburgh	-	-	-	-	-	Dundee	-	General	N. Spit of Gaa Sand in the Tay.
(18) Mary and Catherine. Schooner—76—5.	Dundee	Bo'ness	-	-	-	-	-	Dunkirk	-	Pig Iron	N. side Bremer Rocks coming down the Firth.
(19) Axel Waldeman Schooner—97—6. (13 years.)	Tonsberg	Charleston	-	-	-	-	-	Tromsoe	-	Coals	Lat. 61° 30′ N. Long. 1° 17′ W.
(20) Name unknown Schooner—100—5.	-	-	-	-	-	-	-	-	-	*	25 miles S.E. of Fifeness. (Seen off I. of May by C. Guard.)
(21) Nora	Norway	Cronstadt	23 May	-	-	-	-	Liverpool	-	Cotton and Salt.	Off Cape Wrath.

* See Note to Tables 1 and 6, respecting these Vessels.

RETURN of VESSELS in DISTRESS on the EAST and NORTH-EAST COASTS OF SCOTLAND, 1856.

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty; and whether resulting in total Loss or partial Damage. 18.	No. of Lives lost. Estimated Loss on Property when known. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	Particulars (if any) that can throw light on the Cause of the Casualty. 22.	Would a Harbour of Refuge have saved the Vessel; and, if so, where? 23.
- - -	- -	- - -	Run down; total	5	Supposed to have been run down by a steamer while lying to at anchor, waiting for daylight to beat up the Firth.	- - -	The boat was washed ashore, and looked as if cut down by a steamer.	Not applicable. C. C.
Squally	S. 9	2 hours before high water.	Stranded; got off	Nil. £ 220.	Coming into harbour before high water, struck on some loose rocks and started some of her plates.	No	- - - -	Yes. C. C. It might have been avoided, had the entrance to Fraserburgh Harbour been cleared out. C. G.
Heavy	Variable. 10.	- - -	Dismasted; partial	Nil. £ 200.	Heavy gale	- - -	- - - -	Not answered. Vessel put into Leith to discharge and repair.
- - -	N.W. 7	- - -	Stranded; got off.	Nil.	Got too near shore	- - -	Error in judgment	Put into Bo'ness.
Hazy	S.S.W. 8	¾ flood	Dismasted, and abandoned; total.	Nil. £ 850.	Stress of weather	- - -	- - - -	No. C. G.
- - -	- 12	- - -	Foundered; total	All; say 3	Stress of weather	- - -	- - - -	No information can be obtained. Wreck first seen at daylight on the 6th February. C. G.
Wet	S.W. 12	¾ flood	Foundered; total	3	Stress of weather	No	Parted from her moorings in a whole gale; not since heard of.	No. C.C.
Hazy and dark	S.W. 7	¾ flood	Stranded; total	3 £140	Mistaking bearings; no harbour lights.	- - -	Supposed to have mistaken Wood Haven for Elie Bay.	Unknown; all hands drowned; should be a harbour light at Elie. C.G.
Stormy	W. 12	¾ flood	Stranded; total	4	Gale, which increased to a hurricane.	No	Struck on sands and rock on the 6th, got off without damage and brought to an anchor; wind increased to a hurricane at night; vessel disappeared. Crew and pilot drowned.	No. C.C.
Rain	N.W. 12	- - -	Supposed to have foundered; total.	5 £600	Violent tempest	- - -	Left Berwick on the 6th: driven out to sea and not since heard of.	—
Thick	S.S.W. 12	Ebb tide	Abandoned; water-logged; total.	Nil. £700.	Stress of weather	- - -	Heavy gales from S.S.W.	No. C.C.
Clear	S.E. 11	High water	Stranded; total. Subsequently recovered and taken into Dundee.	Nil. £650	Dragged from her anchors in a hurricane.	- - -	- - - -	No. O.
Squally	N.N.W. 6	- - -	Dismasted and abandoned.	Nil. £190	Stress of weather	- - -	- - - -	No. C.C.
Fine	Calm	- - -	Stranded; got off	Nil.	Wind falling calm, and strong ebb tide. parted from anchor.	- - -	- - - -	No. C.C.
Hazy	W.S.W. 1	High water	Stranded; got off	Nil.	Hazy weather and defective compass.	No	Iron on board deranged the compass.	No. C.G., C.C., and O.
Clear	W.N.W. 8	- - -	Dismasted; partial	Nil. £840	Stress of weather	- - -	- - - -	No. R.W. Put into Sunderland
Fine	N.E. 7	- - -	Stranded; got off	Nil	Stood in too close	- - -	Error in judgment	No. C. C. Taken into Dundee.
Fine	W.N.W. 1.	- - -	Stranded; got off	Nil	Error in judgment	- - -	- - - -	No. C. G. Taken into St. Davids.
Thick	N.E. 9	- - -	Dismasted; partial	Nil £500.	Stress of weather	- - -	- - - -	No. C. G. Taken into Leith.
No particulars	- 9	- - -	Foundered; total	Say 5	- - - -	- - -	- - - -	No particulars. C. G.
- - -	- -	- - -	Damaged by fire; partial.	Nil	Spontaneous combustion of cargo.	Yes	No	Not applicable. Put back to Stornoway.

Return of Vessels in Distress on the E. and N.E. COASTS of SCOTLAND, 1856—*continued.*

Name, Description, and Age of Ship. 1.	Port of Registry if British. 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Cargo. 11.	Exact Spot where Casualty happened or Distress occurred. 12.
(22) Victoria - - Schooner--50--4. (17 years.)	Banff - -	Sunderland -	- -	- -	- -	- -	- - -	Banff - -	- -	Coals	Point of Peterhead called the South Head.
(23) Brothers - - Schooner--57--4. (10 years.)	Dundee -	Sunderland -	- -	- -	- -	- -	- - -	Dundee -	- -	Lime	Bell Rock, miles N. Fife-ness.
(24) Jezelina - Galliot--82--5. (22 years.)	Dutch -	St. Petersburgh	- -	- -	- -	- -	- - -	Newburgh -	- -	Bones	S. side of Riv Ythan.
(25) Taurus - - S. S.--213--14. (1 month, 9 years A 1.)	Varel -	Glasgow -	- -	- -	- -	- -	- - -	Varel - -	- -	Coals	¼ mile N. of Rattray Brig (Reef of sunken Rocks.
(26) Haidee - - Schooner--55--4. (9 years.)	Aberdeen -	Spey - -	17 Aug.	11 A.M.	Moderate -	E.S.E.	- - -	Hartlepool -	- -	Wheat	Spey Carr -
(27) Ballum - - Schooner--64--5.	Denmark -	Iceland -	- -	- -	- -	- -	- - -	Copenhagen -	- -	General	Rocks at N.E. Point of N. Ronaldsha (Orkney.
(28) Ahti - - Schooner--120--7. (5 years.)	Wasa -	Liverpool -	- -	- -	- -	- -	- - -	Wasa - -	- -	General	Dunnett Head, Caithness
(29) Charles - - Brig--131--7. (20 years.)	Aberdeen -	Archangel -	- -	- -	- -	- -	- - -	Aberdeen -	- -	Tar and Mats.	Rocks, back of Banff Harbour.
(30) Johns - - Schooner--98--6. (5¼ years.)	Beauly -	Beauly - -	17 Sept.	A.M.	Fair - -	- -	- - -	Spey - -	- -	Timber	1 mile W. of Spey Carr.
(31) Isabella Anderson Sloop--28--3. (3 years.)	Burghead -	Loading at Burghead.	27 Sept.	11 P.M.	Rough - -	W.N.W.	High water -	- - -	- -	Stones	Off Burghead
(32) Valentine - Brig--370--10. (14 years.)	Rostock -	Newcastle -	- -	- -	- -	- -	- - -	Copenhagen -	- -	Coals	Took ground off Dunbar.
(33) Indelborg Emilie Brig--157--8.	Aster - -	Riga - -	- -	- -	- -	- -	- - -	Fisherrow -	- -	Hemp	Off Leith -
(34) Brothers - - Hermaph.--100--6. (28 years.)	Milford - -	Westport -	- -	- -	- -	- -	- - -	Hartlepool -	- -	Oats	On Ness of Huna.
(35) Despatch - - S. Bark--294--19. (11 months.)	Dublin - -	Inverness -	27 Oct.	10 P.M.	- -	- -	- - -	London -	- -	General	Sandbank at entrance to Littleferry while in charge of a pilot.
(36) Amazone - - Bark--258--11 (9 years.)	Stralsund -	Middlesbrough	9 Nov.	- -	Fine - -	W.N.W.	- - -	Griefswald -	- -	Iron	Off Leith -
(37) Bolette - - Schooner--88--6 (25 years.)	Drammen -	Drammen -	- -	- -	- -	- -	- - -	Wick - -	Ballast	- -	St. John's, Dunnett Head, Pentland Frith.
(38) Recovery - Smack--21--3. (30 years.)	Inverness -	Dundee -	18 Nov.	2 P.M.	Dark - -	N.W. 5	2 hours after high water.	Wick - -	- -	Timber	Cairnbulg Point 2 miles from Fraserburgh.
(39) Eimgkeight - Galliot--87--6. (10 years.)	Konigsberg -	Konigsberg -	- -	- -	- -	- -	- - -	Burntisland -	- -	Iron	Burntisland Harbour.
(40) De Leeaw - Brigantine--226.	Holland -	Riga - -	- -	- -	- -	- -	- - -	Ayr - -	-	Timber	4 miles from Nairn, Moray Frith.
(41) Traffic - - Schooner--91--6. (7 years.)	Banff - -	Sunderland -	6 Nov.	- -	- -	- -	- - -	Thurso -	- -	Lime	In Scrabster Harbour.
(42) Sovereign - Schooner--114--9. (14 years.)	Banff -	Banff - -	4 Dec.	- -	Fresh - -	W.N.W.	1/8 ebb -	London -	- -	Grain	Sunken rock off Cairnbulg, Fraserburgh.
(43) Thornaby - Schooner--66--4.	Kirkaldy -	Newcastle -	3 Dec.	5 A.M.	- -	W.N.W.	High water -	Leith - -	- -	Coals	Annette Bank, Montrose.
(44) Myrtle - - Brig--60--4. (47 years.)	Kirkaldy -	Newcastle -	21 Nov.	Noon	Good - -	Light W.	¾ flood -	Kirkaldy -	- -	Coals	Lunan Bay, Montrose (at anchor)
(45) Grace Gibb - Schooner--51--5. (16 years.)	Wick - -	Hamburgh -	7 Nov.	- -	- -	- -	- - -	Inverness -	- -	Bones	Alburtie Point, 4½ miles E. of Inverness.

Return of Vessels in Distress on the E. and N.E. Coasts of Scotland, 1856—*continued.*

r lty.	Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty; and whether resulting in total Loss or partial Damage. 18.	No. of Lives lost. —— Estimated Loss on Property when known. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21	Particulars (if any) that can throw light on the Cause of the Casualty. 22.	Would a Harbour of Refuge have saved the Vessel; and, if so, where? 23.
t.	Fine	S.S.E. 2	½ ebb	Stranded; total	Nil £280.	Heavy swell and cross tide drove her on rocks.	No	Want of caution in getting under weigh.	No. C. G. and C. C.
.M.	Thick, with rain.	N.E. 5	- - -	Abandoned; total	Nil £560.	Both masts carried away; shipped much water; abandoned.	- - -	- - - -	No. C. G.
t.	Fine	N. 6, changed to E.S.E.	Low water	Stranded; total	Nil £160.	Anchor did not hold; vessel drifted ashore; bad weather and change of wind broke her up.	- - -	Stranded through insufficiency of anchors, and became a total wreck in subsequent storm.	No. C. C.
.M.	Fine	S.S.W. 4	45 minutes past high water.	Stranded; total	Nil. £ 8,700.	Ignorance of coast, and neglect of lead.	- - -	- - - -	No. C. C. an C. G.
.M.	Clear	E.S.E. 4	- - -	Stranded; total	Nil. £ 600.	Wind fell away as vessel was crossing the Bar, which caused her to strike. Next tide it came on to blow, and vessel drifted ashore.	- - -	- - - -	No. C. G.
.M.	Thick fog	S.E. Calm.	- - -	Stranded; total	Nil.	Fog	- - -	- - - -	No. C. C.
-	Squalls	W.N.W. 10.	1 hour flood	Stranded; total	6	Ignorance of tides, and heavy gale.	- - -	- - - -	Yes, in vicinity; if master had been acquainted with it. C. C.
M.]	Squally	E.S.E. 7	2 hours after low water.	Stranded; two thirds cargo saved.	Nil.	Remaining at dangerous anchorage; wind arose and drove her on the rocks.	- - -	Want of judgment; and not letting go 2d anchor.	Not applicable. C. C.
.M.	Hazy	N.N.E. to N.N.W. 8.	- - -	Stranded; total	Nil. £ 1,800.	Stress of weather caused her to break from her moorings.	- - -	- - - -	No. C. G. and C. C.
t.	Thick, with rain.	E.S.E. 10	¾ flood	Stranded; got off	Nil. £460.	Stress of weather; parted from moorings in a gale; drifted out of harbour.	- - -	- - - -	Not applicable. C.G. No. C.C.
M.	Stormy; gale	E. by S. 12.	- - -	Stranded; total	Nil. £1,120.	Stress of weather	- - -	- - - -	Yes, in vicinity. L.A.
t.	Thick	E.N.E. 10	- - -	Stranded; total	Nil. £2,250.	Drove from anchors in Fisherrow Bay, Sept. 27.	- - -	- - - -	- - - -
t.	Hazy	0.	- - -	Stranded; total	Nil. £1,690.	Struck on rock in a dead calm; vessel drifting with tide.	- - -	- - - -	Yes, in vicinity. C.C.
-	Fine and clear	Calm.	- - -	Stranded; got off	Nil. £500.	Want of caution on part of pilot; loss of rudder, &c.	- - -	- - - -	Not applicable.
t.	Stormy	N.E. 9	- - -	Damaged by heavy sea; partial.	3	Stress of weather	- - -	- - - -	No. R.W. Got into Humber.
M.	Hazy	S.W. 2	Young flood	Stranded; total	Nil. £400 and cargo.	Darkness and mist, and trong tide.	- - -	- - - -	No. C.C.
t.	Dark	N.W. 5	High water at 8 P.M.	Stranded; total	Nil £240.	Want of lights; drove on ledge of rocks looking for pilot.	No	Ignorance of coast	There is an accessibl harbour in the vicinity C. C. and C. G.
ht	Cloudy	N.W. 7	- - -	Struck bottom; partial	Nil £750.	Stress of weather	No	Heavy swell struck vessel whilst loading.	Not applicable. Taken into Leith.
-	- -	N.W. 10	- - -	Stranded; got off	Nil	Stress of weather	- - -	Ship had not enough canvass set.	No. C.C.
.M.	Snow	N.N.W. 10.	- - -	Burned; partial	Nil £150.	Stress of weather caused vessel to leak. Cargo heated and set fire to vessel.	No	Struck on anchor	No. C. C.
	Cloudy	W. 6	½ ebb	Stranded; got off	Nil Partial.	No beacon on the rock, and light wanted on Kinnaird Head.	No	Defertive compasses, and not heaving lead.	There is an accessible harbour in the vicinity. No. C. C. Taken into Fraserburgh.
t.	Stormy	W.N.W. 12.	High water	Stranded; total	Nil £500.	Blown on shore by hurricane whilst being towed in for shelter by steam tug.	Yes; Carr Rocks; driven back to Montrose.	- - - -	Possibly in the vicinity C. G Yes, at Montrose. Mate
t.	Thick	S.S.W. 9.	Low water	Foundered; total	Nil Total.	Stress of weather; ship leaky and pumps choked.	Yes; northward to Fern Islands; put back to Sunderland and repaired; when again off Fern Islands had to run for Montrose with wind W.	- - - -	Yes, in vicinity; could not get to Montrose in time. C. C. Yes, at Montrose. M.
t.	Stormy	S.W. 9	- - -	Stranded; total	Nil £600.	Stress of weather; parted from both anchors during a gale.	- - -	- - - -	No. C. C.

Return of Vessels in Distress on the E. and N.E. Coasts of Scotland, 1856—*continued.*

Name, Description, and Age of Ship. 1.	Port of Registry if British. 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Cargo. 11.	Exact Spot where Casualty happened or Distress occurred. 12.
(46) Margarets Schooner—96—6.) (5½ months.)	Aberdeen	Leith	7 Dec.	9 A.M.	Rainy	Moderate W.	High water	Cadiz	-	Wheat	On the rock near Goatness Dunbar.
(47) Earl of Seafield Schooner—49—4.	S. Shields	S. Shields	-	-	-	-	-	Beauly	-	Coals	1 mile E. of Lossiemouth
1857. (48) Countess of Caithness. Schooner—71—5. (5 years 8 m.)	Wick	Shields	31 Dec.	-	-	-	-	Wick	-	Coals	N. pier, Wick struck by in entering harbour.
49) Freyd Schooner—127—6. (22 years.)	Svendborg	Hartlepool	2 Jan.	-	-	Fair wind	-	Denmark	-	Coals	72 miles from Island of M.
50) Maria Brig—274—10. (17 years.)	Weymouth	London	16 Dec.	-	Fine	Westerly	Not known	Shields	Ballast	-	100 miles from Island of Ma
(51) Sarah Botsford Bark—304—10. (16 years.)	Hartlepool	Gottenburg	24 Dec.	-	-	-	-	Berwick	-	Timber	40 miles off the Red Head.
(52) Swende Sodskinde Sloop—59—4.	-	Wyborg	-	-	-	-	-	Leith	-	Wheat	Scoughall Rocks E. of N. Berwick.
(53) Industry Schooner—81—6. (4 years.)	Beauly (Inverness.)	Newcastle	2 Jan.	-	-	-	-	Beauly	-	Coals	½ mile N. Aberdeen
(54) Cromarty Schooner—111—5.	Aberdeen	-	-	-	-	-	-	-	Ballast	-	Catcraig, 3 miles E. of Dunbar.
(55) Maria Annette Sloop—50—4.	Denmark	-	-	-	-	-	-	-	-	Wheat and tares.	Soughall rocks N. Berwick.
(56) Johanna Schooner—72—4. (1 year.)	Barth	Amsterdam	26 Dec.	-	Fine	S.W.	-	Newcastle	-	Oil	Firth of Fort
(57) Maria Schooner—101—6. (17 years.)	Denmark	Denmark	9 Dec.	-	Fine	Fair	-	Drontheim	-	Barley	Bore up in the N.sea. 20 m. off Peterhead
(58) Janetta Schooner—60—4. (18 years.)	Newcastle	Brora	24 Dec.	-	Fine	Fair	-	Newcastle	-	Timber	Dunskeith Cromarty Firth.
(59) Laurel Schooner—76—7. (3 years.)	Stromness	Leith	17 Jan.	-	-	Fair	-	Stromness	-	General	N. point Burra.
(60) Dan Glaister Schooner—70—5.	Macduff	Liverpool	1 Jan.	-	-	-	-	Montrose	-	Salt	Charlton sands 2 miles N. Northesk.
(61) Southesk Brig—170—8. (9¾ years.)	Montrose	Gottenburg	13 Jan.	-	Fair	Fair	-	Montrose	-	Timber	S. side entrance River South Esk.
(62) Mabon Schooner—109—6. (16 years.)	Arbroath	Seaham	30 Jan.	-	-	-	-	Arbroath	-	Coals	N. point Montrose.
(63) Jane Schooner—45—3. (19 years.)	Cork	Leith	2 Feb.	-	-	-	-	Cromarty	-	Manure	Kirktown Bu 4 miles N Peterhead.
(64) Falcon Schooner—101—6. (19 years.)	Aberdeen	Sunderland	26 Feb.	5 A.M.	-	-	-	Newburgh	-	Lime	S. bank River Ythan.
(65) Annabella Smack—42—4. (32 years.)	Stornoway	Scrabster	27 Feb.	11 A.M.	-	-	-	Liverpool	-	Potatoes	Pentland Skerries.
(66) Jeanie Sloop—57—4.	Newcastle	Leith	-	-	-	-	-	Newcastle	-	Pig Iron	2 miles N. St. Abb Head.
(67) Alert Schooner—76—5.	Sunderland	Sunderland	-	-	-	-	-	Cromarty	-	Coals	Bay of Findhorn, W. point of bar.
(68) Sir Edward Banks Schooner—59—5. (32 years.)	Aberdeen	Newcastle	-	-	-	-	-	Aberdeen	-	Iron	Entrance Elie harbour.
(69) Arab	Peterhead	Speymouth	12 Mar.	-	-	-	-	Fraserburgh	Ballast	-	Moray Frith off Fraserburgh.
(70) Spes Nova Brig—181—10 (Age unknown.)	Strathelle	Strathelle	10 Mar.	-	-	-	-	Portsmouth	-	Timber	North Sea, off Isle of May.
(71) Horta Brig—247—9. (Age unknown.)	Shields	Shields	16 Mar.	-	-	-	-	Hamburgh	-	Coals	North Sea
(72) Ceres Schooner—88—6. (14 years.)	Inverness	Dantzic	21 Nov.	-	-	-	-	Dundee	-	Wheat	Lat. 59° 47′ N. Lon. 0° 22′ W.

Return of Vessels in Distress on the E. and N.E. COASTS of SCOTLAND, 1857—*continued.*

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty; and whether resulting in total Loss or partial Damage. 18.	No. of Lives lost. — Estimated Loss on Property when known. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	Particulars (if any) that can throw light on the Cause of the Casualty. 22.	Would a Harbour of Refuge have saved the Vessel; and, if so, where? 23.
Cloudy	S.W. 10	High water	Stranded	Nil	Want of light to mark the reef of rocks near Goatness, Dunbar. C.G.	Yes; had reached Coquet Island.	-	No. C. G. Perhaps at Coquet Island. C. C.
Snowy	N.N.E. 9.	3 hours flood	Stranded; total	Nil £200.	Stress of weather, and thick snowy atmosphere.	-	-	No. C. G.
Dark	E.S.E. 4.	-	Stranded; total	Nil. £1,775.	Entered harbour too soon on tide; mistook lights in a doctor's carriage for pilot's signal to take harbour.	-	-	Yes, in vicinity. C.C.
Stormy, with snow.	E.S.E. 11	-	Foundered; total	Nil. £665.	Sprung a leak through stress of weather.	-	-	-
Thick snow	E.S.E. 11	Not known	Dismasted; partial	1 washed overboard. £450.	Stress of weather	Was driven as far N. as the I. of May in a gale of wind from W.N.W. to S.S.E.	The wreck was occasioned solely by the severity of the weather.	No. C.C. Put into Leith.
Thick, with snow.	S.E. 11	-	Leaky; partial	Nil. £300.	Stress of weather	-	-	Bore up for the Frith of Forth and put into Leith Dock.
Hail	E. 11	¼ flood	Stranded; total	4	Stress of weather	-	-	-
Thick, and snowy.	E.S.E. 9	High water	Stranded	Nil.	Stress of weather; heavy gale and sea dead on shore.	-	-	No. C.G.
Stormy	E.S.E. 11	2 hours flood	Stranded; total	5	Stress of weather	-	-	-
Stormy	E.S.E. 11	1 hour flood	Stranded; total	4	Stress of weather	-	-	-
Hail	S.E. 11	-	Leaky; partial	Nil. £20	Stress of weather	-	-	Put into Granton.
Snow	S.E. 10	-	Leaky; partial	Nil. £1,220	Stress of weather; leaky since 19th December, when on coast of Norway.	-	-	Put into Leith.
Snow storms	E.N. & by E. 11	¼ flood	Stranded; total	Nil. £490	Stress of weather	-	-	No. C.G.
Squally, with showers.	S. 9	-	Stranded; got off	Nil. £260	Stress of weather; parted cables when getting under weigh.	-	-	Yes, in vicinity. C.C.
Dark and hazy	W. 5	High water	Stranded; got off	Nil.	Negligence of Pilot	-	-	No. C.G.
Squally, dark, and cloudy.	N.W. by N. 6.	30 minutes to high water.	Stranded; total	Nil. £ 1,525.	Strong tide swept vessel on the rocks, while being towed into the harbour.	-	Want of power in steam tug.	No. C.C.
Thick and hazy.	S. 7.	High water	Stranded; total	Nil. £ 750.	Stress of weather	-	Wheel broken by sea; vessel could not be steered.	No. C. G.
Thick, with snow.	S.S.W. 8	Low water	Struck rocks; total	Nil. £ 300.	Hugged the shore too close in thick snow.	-	Want of caution	No. C. G.
Fine	S. Calm	1 hour 20 min. before high water.	Stranded; partial	Nil. £ 55.	Becalmed crossing the Bar, and carried by strong current on the S. bank of river.	-	-	No. C. G.
Fine	Calm	-	Struck rocks and sunk in deep water; total.	Nil. £ 700.	Heavy roll of sea, and no wind.	-	-	-
Cloudy	N. 8	Near low water.	Foundered; total	Nil.	Sprung a leak through stress of weather.	-	Could not be kept afloat with heavy cargo.	No. C. G.
Squally	N.W. 10	-	Stranded; total	Nil. £460.	Stress of weather	-	-	No. C. C.
Hazy	S.W. 9	2 hours ebb	Stranded; got off	Nil.	Stress of weather Sprung a leak; bore up and stranded in entering harbour.	-	Stranded in consequence of state of the tide.	Yes; in vicinity. C.G.
Stormy; gale	S.W.	5 hours gone	Disabled; partial	Nil.	Stress of weather, and being unable to get into Fraserburgh.	-	Waited off Fraserburgh from 12th to 17th, but could not get in, bore away crippled to Lossiemouth to refit.	-
Variable	S.E. 10	-	Leaky; partial	Nil.	Stress of weather	-	-	Got into Leith. C. C.
Variable	-	-	Leaky; partial	Nil.	Stress of weather	-	-	Got into Leith. C. C.
Hazy	E.S.E. 10	-	Dismasted; partial	Nil. £700.	Stress of weather	-	-	No. C. C. Taken to Inverness.

Return of Vessels in Distress on the E. and N.E. Coasts of Scotland, 1857—*continued.*

Name, Description, and Age of Ship. 1.	Port of Registry if British. 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Cargo. 11.	Exact Spot where Casualty happened or Distress occurred. 12.
(73) Fox Schooner—75—5. (16 years.)	Carnarvon	Menai	-	-	Hazy	S.S.E. 7	-	South Shields	-	Slates	Annette Bank, Montrose.
(74) Reintje Willemina. Schooner—60—4. (1 year.)	Groningen	Dantzic	-	-	-	-	-	Leith	-	Barley	Craig Rock, Speymouth.
(75) Favourite Brig—182—7. (20 years.)	Blyth	Blyth	16 Mar.	-	-	-	-	Swinemund	-	Coals	North Sea
(76) Undine Galliot—63—5.	Norway	Stathelle	9 Mar.	-	Fine	-	-	Ostend	-	Timber	Annette Bank, Montrose.
(77) Oracle Schooner—56—4. (30 years.)	Sunderland	Wick	27 Mar.	-	-	-	-	Orkneys	Ballast	-	Wick Bay
(78) Happy Return Schooner—63—4. (57 years,)	Sunderland	Sunderland	28 Mar.	-	Moderate	S.S.E.	-	Inverness	-	Coals	25 miles S.S.E. of Stonehaven
(79) Betsey Schooner—91—6. (8 years.)	Portsoy, N.B.	Aberdour	16 Mar.	-	-	-	-	Dantsic	-	Coals	Off of Rose-hearty.
(80) Name Unknown Schooner—70—5. (Age unknown.)	No papers on board.	-	-	-	-	-	-	-	-	Timber	Supposed at sea.
(81) Brothers Smack—29—3. (13 years.)	Wick	Castle Hill Creek, Scrabster	28 Mar.	10 P.M.	Fine	Calm	-	Leith	-	Oats	Spur of Murkle, Scrabster.
(82) Dagman Sloop—71—6. (20 years.)	Nexoe	Holbech	18 Mar.	-	-	-	-	Leith	-	Barley	Abertay Sands, Dundee.
(83) Hildine Annetta Schooner—80—6. (Age unknown.)	Tonsberg	Tonsberg	-	-	-	-	-	N. B.	-	Battens	Picked up [illegible] 26′ N. & [illegible] E.
(84) Name unknown Schooner—90—6. (Age unknown.)	Norway	-	-	-	-	-	-	-	-	Timber	S. of Redcastle, Lunan Bay.
(85) Jane Landale Schooner—53—4. (12 years.)	Liverpool	London	23 Mar.	-	-	-	-	Invergordon	-	Guano	Abertay Sand, Dundee.
(86) Shelah Schooner—116—6. (16 years.)	Grangemouth	Rotterdam	31 Mar.	-	-	-	-	Grangemouth	Ballast	-	Catcraig 3 miles E. of Dunbar.
(87) Rapid S. S.—330—22 (7 months.)	Leith	London	8 April	-	Light winds	Variable	-	Leith	-	General	Vous Rocks, N. Kirkaldy.
(88) Weanterflide Schooner—111—6. (11 years.)	Drammen	Drammen	-	-	-	-	-	St. Andrews	-	Battens	Rocks off outer pier, St. Andrews.
(89) Furst Borwin III. Schooner—82—5. (12 years).	Newcastle	Sunderland	8 April	-	-	-	-	Wick	-	Lime	Pulteney Harbour, Wick.
(90) Landbourne Smack—61—5.	Veendaam	Aberdeen	-	-	-	-	-	Hamburgh	-	Coals	W. of I. of May
(91) Queen S.S.—336—31. (Age unknown).	Aberdeen	Aberdeen	18 April	6 P.M.	-	-	-	Leith	-	General and Passengers.	Carr Rocks
(92) James Schooner—71—4. (16 years).	Alloa	Alloa	20 April	-	-	-		Newburgh	-	Coals	S. side of R. Ythan.
(93) Sir William Wallace. Brig—183—10.	Aberdeen	Aberdeen	17 April	-	-	-	-	Quebec	Ballast	-	Outside Aberdeen.
(94) Favorite Brig—206—11. (13 years).	Aberdeen	Aberdeen	19 May	-	-	-	-	Kooria Mooria	Ballast	-	N.W. of Duncansby Head.
(95) Frederic Brig—210—10. (6 years).	Lubeck	Cronstadt	-	-	-	-	-	Boston, N.S.	Ballast	-	Cove Bay, Rocks off C. Gd. Station.
(96) Blue Bonnet Schooner—121—7. (14 months).	Leith	Lerwick	24 May	-	-	Strong, favourable	-	Scrabster	Ballast	-	S.E. end of Stroma island.
(97) Oracle Schooner—54—4. (4 years).	Sunderland	Sunderland	-	-	-	-	-	Peterhead	-	Lime	Peterhead, S. Quay.

Return of Vessels in Distress on the E. and N.E. Coasts of Scotland, 1857—*continued.*

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether resulting in total Loss or partial Damage. 18.	No. of Lives lost. —— Estimated Loss on Property when known. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and if so, how far had she reached Southward or Northward on her Voyage? 21.	Particulars (if any) that can throw light on the Cause of the Casualty. 22.	Would a Harbour of Refuge have saved the Vessel? and, if so, where? 23.
Hazy	S.S.E. 7	1½ hours ebb	Stranded; total	Nil. £800.	Whilst running in lost her steerage through a heavy sea and heavy fresh ebb.	- - -	- - -	Yes, in vicinity. C.G.
Cloudy	E.S.E. 6	- - -	Stranded	Nil. £800.	Sprung leak at sea; crew exhausted; run ashore to save her.	- - -	- - -	No. C. G.
Snow and sleet.	S.E. 10	- - -	Dismasted; partial	Nil. £200.	Stress of weather; gale in North Sea.	- - -	- - -	Put into Inverness. C. C.
Squally and hazy.	E.N.E. 6	- - -	Stranded; total	Nil. £200.	Stress of weather	- - -	Ran for Montrose harbour in ignorance of locality; thick weather.	Yes, Montrose. C. G.
Clear	E.N.E. 4.	- - -	Stranded; got off	Nil. £100.	Missed stays in working out of bay.	- - -	- - -	Yes, in vicinity. C. C.
Hazy	S.S.E. 10	- - -	Abandoned; total Afterwards picked up derelict.	1 £495.	Leaky through stress of weather.	- - -	Too deeply laden	No. C. C.
Thick and Cloudy.	S.S.E. 8	- - -	Stranded; total	Nil.	Too close to shore, and neglect of lead in thick weather.	- - -	Error in reckoning	No. C. G.
- - -	- -	- - -	Dismasted and abandoned; drove ashore near Rattray.	Unknown.	Supposed to be stress of weather.	- - -	- - -	- - -
Thick	S.E. 1	- - -	Stranded; got off.	Nil. £240.	Drifted on shore in dead calm; thick weather.	- - -	- - -	No; Castle Hill Creek only 3 miles distant. C.C.
Thick	E. Moderate	High water	Stranded; total	Nil. £1,900.	Error in course; mistook the Tay for the Forth.	- - -	- - -	No. C. C.
Thick	S.E. 9	- - -	Abandoned, dismasted and water-logged; picked up derelict and towed towards Aberdeen by "Olga;" "Olga" eventually cast her off, and she stranded near Rattray Head.	6 £200.	Stress of weather.	- - -	- - -	- - -
Hazy and rain	E. 6	- - -	Abandoned at sea, dismasted and water-logged, and afterwards stranded; broke up 10 minutes after stranding; total.	All hands, Number unknown; say 6	Stress of weather and unseaworthiness.	- - -	Unseaworthy; "this vessel was, without exception, the most rotten and worn out thing ever seen by the coast guard officer; supposed to be 100 years old; lining was payed with red ochre clay to keep her staunch."	No. C. G.
Very thick	E. 7	High water	Stranded	Nil.	Taking Montrose Harbour in thick weather. Vessel became unmanageable when at the bar.	- - -	- - -	No. C. C.
Thick fog	S.E. 6	Just past high water.	Stranded; total	Nil. £1,000.	Mistaking lights of Oxwell Main lime kilns for Tay Lights.	- - -	- - -	No. C. G.
Dense fog	Variable 1	- - -	Stranded; got off	Nil.	Thick weather. Log and lead had been kept going,	- - -	- - -	Not applicable. C. C.
Cloudy	W. 4	High water	Stranded; total	Nil.	Thrown by swell against rocks in entering harbour.	- - -	- - -	No. C. G.
Clear	N.E. 2	High water	Burned; total	Nil. £525	Leaked through thumping; cargo heated and took fire.	No	- - -	Yes, in vicinity. C.C.
- - -	- -	- - -	Run down; total	Supposed 5 £50	Supposed to have been run down.	- - -	- - -	Cannot say in this case. Taken into Kirkaldy derelict. C.G.
- - -	6.	- - -	Stranded	Nil.	Shaped wrong course for Bell Rocks; struck on Carr Rocks, got off and ran along shore. Stranded her to save life and property.	- - -	- - -	- - -
Fine	N.W. 3	High water	Stranded; got off	Nil.	Current took vessel aback, when working up river.	- - -	- - -	Not applicable. C.G.
Cloudy	S.E. 6	- - -	Leaky; partial	Nil.	Sprung a leak on leaving her port of departure.	- - -	- - -	Put into Stornoway to discharge.
Fine	S. 4 and then 0.	- - -	Stranded; total	Nil. £2,000	Got into the eddy and became becalmed; drifted ashore.	- - -	- - -	No. C.C.
Thick fog	E. 2	¼ flood	Stranded; got off	Nil.	Thick fog, and error in reckoning.	- - -	- - -	No. C.G.
Fog	S.E. 2	½ Ebb	Stranded; total	Nil. £1,600	Tide, dense fog, and want of wind to keep steerage way.	- - -	- - -	Very doubtful in this case. C.C.
Fine	S.W. 3	½ flood	Burned; total	Nil. £430	Heating of cargo; cannot be accounted for; vessel tight, and cargo dry.	No	- - -	No. C.G.

Return of Vessels in Distress on the E. and N.E. Coasts of Scotland, 1857—*continued.*

Name, Description, and Age of Ship.	Port of Registry if British.	Port sailed from.	Date of sailing.	Hour of sailing.	Weather at Time of sailing.	Wind at Time of sailing.	Tide at Time of sailing.	Port bound to	Whether in Ballast or with Cargo.		Exact spot where Casualty happened or Distress occurred.
									Ballast.	Cargo.	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
(98) Henriette Brig—131—7 (Age unknown.)	Dram	Charleston, N.B.	5 July	-	-	S.	-	Christiana	-	Coals	Off Leith
(99) William Henry Schooner—81—5 (5 years.)	Liverpool	Liverpool	18 July	-	-	-	-	Lossiemouth	-	Salt	Ness of Duncansby.
(100) Paragon Bark—416—14 (15 years.)	Shields	Quebec	21 June	-	-	-	-	Shields	-	Timber	West end of Isle of Stroma
(101) De 4 Broeders Galliott—100—5 (Age unknown.)	Holland	Liverpool	30 July	-	Fine	-	-	-	-	Salt	Isle of Stroma
(102) European Ship—678—17 (Age unknown.)	New Orleans	Shields	11 July	-	-	-	-	Matanzas	-	Coals	Off Stromness 40 or 50 miles to west of Orkneys.
(103) London Packet Schooner—81—6 (22 years.)	Arbroath	Stettin	-	-	-	-	-	Ipswich	-	Barley	Lat. 56° 43 N. Lon. 1° 0' E.
(104) Midge Schooner—59—4 (16 years.)	Inverness	Inverness	5 August	12.30 P.M.	-	-	-	Newcastle	-	Wood	Mouth of Inverness Harbour.
(105) Hope Ship—880—23	New York	Newcastle	-	-	-	-	-	New York	-	Coals	Sea, 80 miles from Kirkwall.
(106) Earl of Clarendon. Schooner—83—5 (1 year.)	Banff	Sunderland	11 Aug.	-	-	-	-	Macduff	-	Coals	Collie Rock Macduff.
(107) Telegraphen Schooner—141—7 (4 years.)	Copenhagen	Dantzic	7 Aug.	-	-	-	-	Londonderry	-	Wheat	Start Point, Sanda, Orkney.
(108) Fredericke Schooner—58—4. (8 years).	Weiserdeich	Peterhead	-	-	-	-	-	Bremen	-	Fish and oil.	S.E. Head between N. and S. Harbour of Peterhead.
(109) Perseverance Bark—489—15. (14 years.)	St.John's, N.B.	Dundee	17 Aug.	-	-	-	-	Miramichi	-	Coals	N. side of Freswick Bay.
(110) Dunairn Sloop—40—2.	Sunderland	Sunderland	22 Aug.	-	-	-	-	Moray Frith	-	Coals	Saltstone Rock near Banff.
(111) Providence Sloop—44—4. (11 years.)	Port Madoc	Port Madoc	20 Aug.	-	-	N.E.	-	Dundee	-	Slates	Rocks at Cairnbulg.
(112) Daigs Sloop—19—2. (25 years.)	Fraserburgh	Fraserburgh	18 Sept.	-	-	-	-	Aberdeen	-	Fish and oil.	W. of Aberdeen breakwater.
(113) Keepsake Brig—311—11. (11 years.)	Workington	Quebec	-	-	-	-	-	Dunbar	-	Timber	Dunbar Harbour, 100 yds. from E. Pier.
(114) Brazilian Brig—227—8. (14 years).	Dundee	Liverpool	28 Aug.	-	-	-	Fair	Narva	-	Salt	Off Stromness
(115) Peggy Sloop—32—2. (42 years.)	Leith	Buckhaven	1 Oct.	-	-	Fair	-	Leith	-	Fish	Between Inch Keith and the Vous Rock.
(116) Hebe Schooner—74—4.	Dundee	Bolness	-	-	-	-	-	Dieppe	-	Coals	Off St. Abb's Head.
(117) Times Sloop—48—3. (8 years.)	Alloa	Newcastle	5 Oct.	-	-	-	-	Alloa	-	General	Doig's Rock, Firth of Forth.
(118) Concordia Schooner—148—7 (Age unknown.)	Altona	Wick	31 Oct.	-	-	-	-	Harborg	-	Fish	Wick
(119) Janet and Ann Schooner—19—3. (13 years.)	Inverness	Nairn	-	-	-	-	-	Rosehearty	-	Timber	Rocks, Sandy Bay, 5 miles W. of Banff.
(120) Ophelia Schooner—99—7. (3 years.)	Banff	Leith	-	-	-	-	-	Newcastle	Ballast	-	N. Pier, Macduff Harbour.
(121) Darling Schooner—88—5. (16 years.)	Inverness	Hartlepool	19 Nov.	-	Fair	-	-	Inverness	-	Coals	Longman Inverness.
(122) Brighton Schooner—53—3. (Age unknown.)	Stockton	Arbroath	21 Nov.	-	-	-	-	Middlesbro'	Ballast	-	Outside Harbour of Arbroath.
(123) Martello S.S.—325—32. (15 years.)	Inverness	Inverness	27 Nov.	5 15 P.M.	Clear	Fair	-	Granton	-	General and Passengers.	Carr Rocks, Fifeness.

Return of Vessels in Distress on the E. and N.E. Coasts of Scotland, 1857—*continued.*

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether resulting in total Loss or partial Damage. 18.	No. of Lives lost. —— Estimated Loss on Property when known. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	Particulars (if any) that can throw light on the Cause of the Casualty. 22.	Would a Harbour of Refuge have saved the Vessel and, if so, where? 23.
Stormy	N.E. 8	- - -	Leaky; stranded	Nil.	Sprung a leak at sea; took ground outside harbour, whilst entering in charge of a pilot.	- - -	- - - -	- - - -
Moderate	W. 1	4 hours ebb	Stranded; got off	Nil.	Strong current and light wind.	- - -	- - - -	- - - -
Fine	W. 0.	½ flood	Stranded; got off	Nil.	Strong current and calm weather.	- - -	- - - -	Not applicable. C.C.
Fine	Variable	- - -	Stranded, total	Nil.	Sea running high, vessel dragged on rocks by tide. No wind.	- - -	- - - -	- - -
Rainy	W.N.W 7.	- - -	Leaky; partial	Nil.	Stress of weather caused her to strain at sea.	- - -	- - - -	Put into Stromness.
Bad	W. 9	- - -	Foundered; total	Nil.	Sprung a leak	- - -	- - - -	- - - -
Fair	N.N.E. 5	- - -	Stranded; got off	Nil. £60	Error of pilot when taking her out of harbour.	- - -	- - - -	Not applicable. C.G.
Fine	9	- - -	Leak; partial	Nil.	- - - - -	- - -	- - - -	Put into Kirkwall to repair.
Dense fog	E.N.E. 3	¼ flood	Stranded; total	2 £50	Neglect of lead in dense fog.	- - -	Want of judgment in getting vessel under weigh in a fog; also in casting her in, instead of off, shore.	Not applicable. C.G.
Dense fog	E. 2	High water	Stranded; total	Nil.	Thick weather	- - -	- - - -	Not applicable. C.C.
Calm	- -	Nearly low water.	Stranded; total	Nil. £330.	Calm; strong wind drove vessel on rocks.	- - -	Vessel unmanageable	No. C.G
Thick fog	S. 5.	½ flood.	Stranded; got off	Nil. £2,250.	Going at full speed through Pentland Firth in a fog.	- - -	- - - -	No. C.C.
Stormy	W.N.W. 7.	- - -	Stranded; total	Nil. £100.	Stress of weather; caught in strong gale off Cullen Head.	- - -	Struck a rock when running for shelter	- - - -
Thick	S.W. 2	5 hours flood	Stranded; got off	Nil.	Thick weather and defective chart.	- - -	- - -	No. C.G. and C.C.
Squally, with rain.	N. 9.	Last ¼ ebb	Stranded; total	Nil. £110.	Strong current in river	- - -	- - - -	Not applicable. C.G.
Fine	E.N.E. 3	High water	Stranded; total	Nil. £2,000.	Wind falling light and vessel losing steerage-way whilst entering harbour.	- - -	- - - -	No. Vessel bound to Dunbar. C.G.
Bad	Variable. 8.	- - -	Leaky; partial	Nil.	Unseaworthy; leak daily increasing.	- - -	Imperfect repair	No. C.G. Put into Stromness.
Thick	W. Gale.	½ flood	Capsized; total	Nil. £520.	Sudden squalls of wind drove her on beam ends and filled her.	- - -	- - - -	No. C.C.
Thick	W.N.W. 10.	- -	Foundered; total	Nil.	Sprung a leak, which could not be kept under.	- - -	Pumps choked	- - - -
Fair	W.N.W. 6.	1 hour flood	Stranded; got off	Nil.	Mistaking bearings for want of a buoy.	- - -	- - - -	No. C.C.
Middling	S.S.W. 6.	- - -	Stranded; got off	Nil.	Struck by heavy sea on leaving Wick in charge of pilot. Put back on 3d Nov.	- - -	Want of caution	No. C.C.
Hazy	W.S.W. 12.	- - -	Stranded; total	3	Great gale	- - -	- - - -	No. C.C.
Squally	E. 9.	1½ h. to high water.	Stranded; total	Nil.	Unmanageable through ballast shifting and loss of sails and rudder.	- -	- - - -	No. C.G.
Thick and rain	N.E. 9.	½ tide	Stranded	Nil.	Driven from anchors at Longmans in heavy gale.	- - -	- - - -	No. C.C.
Heavy	S. 6.	Tide falling	Stranded; got off	Nil.	Struck pier head	- - -	Running in without a pilot.	- - - -
Hazy	W. 2	- - -	Stranded	Nil.	Master states, "Compasses affected by fog, and by moving masses of iron on board."	- - -	Defective compasses, and running without lead in a fog. The loss of this vessel amounted to default on part of the mate, whose certificate was suspended in consequence.	- - - -

Return of Vessels in Distress on the E. and N.E. Coasts of Scotland, 1857—*continued.*

Name, Description, and Age of Ship. 1.	Port of Registry if British. 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at time of sailing. 6.	Wind at Time of sailing. 7.	Tide at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Whether in Ballast or with Cargo. Cargo. 11.	Exact Sp where Casua happene or Distre occurred. 12.
(124, 125) 2 Fishing Boats.	Port Knockie	The morning was so clear and fine that these five boats had ventured half across the Moray Firth.									
(126, 127) 2 Fishing Boats.	Buckie -										
(128) Fishing Boat -	Port Gordon -										
(129) Elizabeth - Brig—109—6. (25 years.)	Arbroath -	Dundee -	5 Dec.	- -	- - -	- -	- - -	Seaham -	Ballast	- -	Entrance t Arbroath Harbour.
(130) Planet - - Bark—392—15.	London -	Quebec -	- -	- -	- - -	- -	- - -	Sunderland -	- -	Timber	15 miles fr Rattray Hea
(131) Ebenezer - Schooner.—65—5. (20 years.)	Sunderland -	Alloa -	14 Dec.	- -	- - -	- -	- - -	Newburgh -	- -	Coals -	N. side of mouth of r Ythan in entering p

N.B.—The particulars given in Column 1 of the above Return are arranged as follows; viz.,

(Name of Vessel)

(Rig)—(Tonnage)—(Hands composing Crew)

(Vessel's Age)

Return of Vessels in Distress on the E. and N.E. Coasts of Scotland, 1857—*continued.*

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty and whether resulting in total Loss or partial Damage. 18.	No. of Lives lost. — Estimated Loss on Property when known. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage. 21.	Particulars (if any) that can throw light on the Cause of the Casualty. 22.	Would a Harbour of Refuge have saved the Vessel and, if so, where? 23.
- - -	12	- - -	Swamped - -	18 17 8	Sudden gale of a most violent character, 27 widows and 79 orphans were left by the crews of these 5 boats.	- - -	- - - -	- - - -
Wet - -	S.S.W. 10	- - -	Struck; got off.	Nil. £300.	Trying to make harbour in stress of weather.	- - -	- - - -	- - - -
Bad - -	W.S.W. 9	- - -	Abandoned; total -	Nil.	Sprung a leak in heavy weather.	- - -	- - - -	- - - -
- - -	S.S.W. 7	1 hour past high water.	Stranded; got off.	Nil. £350.	Got out of proper channel through tow rope breaking, and want of judgment.	- - -	- - - -	No. C.G.

The Initials in Column 23 have the following meaning; viz., C.G. Officer of Coast Guard, C.C. Collector of Customs, R.W. Receiver of Wreck, M. the Master, and O. the Owner of the Ship.

Collectors of Customs in Scotland are also Receivers of Wreck under the provisions of the Merchant Shipping Act, 1854.

SUMMARY
OF THE
PRECEDING RETURN OF VESSELS IN DISTRESS (OTHERWISE THAN BY COLLISION) ON THE EAST AND NORTH-EAST COASTS OF SCOTLAND,

During the Years 1856 and 1857.

TABLE 1.—Wrecks and Casualties, distinguishing Total from Partial Losses, and Vessels with Cargoes from Vessels in Ballast; and further distinguishing Colliers in Ballast from other Vessels in Ballast.

Casualties resulting in **total** losses; viz.—			
To Vessels in ballast { Colliers	2		
To Vessels in ballast { other Vessels	5	7	
To Vessels with cargoes		61	
*To Vessels whether with cargoes or in ballast, unknown		2	
			70
Casualties resulting in **partial** losses; viz.—			
To Vessels in ballast { Colliers	3		
To Vessels in ballast { other Vessels	4	7	
To Vessels with cargoes		42	
To Vessels whether with cargoes or in ballast, unknown		0	
			49
Casualties, whether resulting in partial or total losses, not known:—			
To Vessels with cargoes			12
Total casualties			131

Loaded vessels, 115; Light vessels, 14; Unknown (probably loaded), 2; = 131 Total.
Or say, as Loaded : Light : : 8 : 1

* See Nos. (6) and (20) in the Return.

TABLE 2.—Wrecks and Casualties, arranged according to the Places at or near to which they happened; and according to Districts; and showing the Number in the Return under which each Casualty is to be found.

PLACES.

Aberdeen, 53. 93. 112	3
Aberlady, 9	1
Arbroath, 122. 129	2
Banff, 29. 110. 119	3
Bass Rock, 11	1
Bell Rock, 23	1
Bremer Rock, 18	1
Buckie, 126. 127	2
Burra (I. of), 59	1
Burghead, 31	1
Burntisland, 39	1
Cairnbulg, 38. 42. 111	3
Carr Rocks, 91. 123	2
Cockenzie, 1. 6. 115	3
Cove Bay, 95	1
Craig Rock, 74	1
Craigmore Rocks, 4	1
Doigs Rock, 117	1
Dunbar, 32. 46. 54. 86. 113	5
Duncansby, 94. 99	2
Dundee, 82. 85	2
Dunnett Head, 13. 28. 37	3
Dunskeith, 58	1
Elie, 8. 15. 68	3
Findhorn, 67	1
Fraserburgh, 2. 69	2
Freswick, 109	1
Carried forward	49

Brought forward	49
Gaa Sand, 17	1
Granton, 7	1
Inverness, 45. 104. 121	3
Kirkcaldy, 87	1
Leith, 33. 36. 98	3
Little Ferry, 14. 35	2
Lossiemouth, 47	1
Macduff, 106. 120	2
May (I. of), 5	1
Montrose, 43. 44. 62. 73. 76. 84	6
Nairn, 40	1
Ness of Huna, 34	1
North Berwick, 52. 55	2
Northesk, 60	1
Peterhead, 22. 63. 97. 108	4
Port Gordon, 128	1
Port Knockie, 124. 125	2
Rattray Briggs, 25. 130	2
Ronaldshay (N.), 27	1
Rosehearty, 79	1
Sanda (Orkney), 107	1
Scrabster, 41. 81	2
Skerries, 65	1
Southesk, 61	1
Carried forward	91

Brought forward		91
Spey Carr, 26. 30		2
St. Abb's Head, 16. 66. 116		3
St. Andrews, 88		1
Stonehaven, 78		1
Stroma, 96. 100. 101		3
Stromness, 114		1
Tay, 12		1
Wick, 48. 77. 89. 118		4
Ythan (River), 24. 64. 92. 131		4
SEA.		
Off East Coast, 3. 10	2	
Cape Wrath, 21. 105	2	
Peterhead, 57	1	
put into Granton, 56	1	
Isle of May, 20. 49. 50. 70. 90	5	
Red Head, 51	1	
Stromness, 102	1	
Bearings not given, 19. 71. 72. 75. 80. 83. 103	7	
		20
Total		131

TABLE 2—*Continued.*

DISTRICTS.

1. From Cape Wrath to Noss Head, including the Orkney Islands and the Pentland Firth,	13. 21. 27. 28. 34. 37. 41. 59. 65. 81. 94. 96. 99. 100. 101. *102. *105. 107. 109. 114.	20
2. From Noss Head to Tarbet Ness, including Dornoch Firth,	14. 35. 48. 77. 89. 118.	6
3. From Tarbert Ness to Coulard Hill, including the Moray Firth,	31. 40. 45. 58. 67. *72. *75. 104. 121.	9
4. From Coulard Hill to Cairnbulg,	2. 26. 29. 30. 47. 69. 74. 79. 106. 110. 119. 120. 124. 125. 126. 127. 128.	17
5. From Cairnbulg to Buchanness,	22. 25. 38. 42. 57. 63. *80. *83. 97. 108. 111. 130.	12
6. From Buchanness to Dunnotar Head,	24. 53. 64. 78. 92. 93. 95. 112. 131.	9
7. From Dunnotar Head to Arbroath,	43. 44. 60. 61. 62. 73. 76. 84.	8
8. From Arbroath to Fife Ness, including the Firth of Tay,	12. 17. 23. 82. 85. 88. 122. 129.	8
9. From Fife Ness to St. Abb's Head, including the Firth of Forth,	1. 3. 4. 5. 6. 7. 8. 9. *10. 11. 15. 16. 18. *19. *20. 32. 33. 36. 39. 46. *49. *50. *51. 52. 54. 55. 56. 66. 68. *70. *71. 86. 87. 90. 91. 98. *103. 113. 115. 116. 117. 123.	42
	TOTAL	131

* *Note.*—The Casualties represented by the numbers marked thus * did not in many cases occur within the districts above named. They are, however, either included in the district nearest to which they appear to have happened, or in that to which the vessels were taken after the distress occurred.

TABLE 3.—Wrecks and Casualties, showing the Nature of the Casualties.

Abandoned at sea from various causes		8
Burned—(fire caused by spontaneous combustion of a cargo of cotton and salt)		1
„ (fire caused by cargoes of lime getting wet)		3
Damaged whilst being towed in or out of Harbours		3
Foundered (at sea or at anchors)		13
Leaky or disabled—put in for repairs or to discharge		19
Run down at sea or at anchors		2
Stranded or struck on rocks, sands, &c. from various causes		54
Stranded or struck on piers or bars on entering or leaving harbours :—		
Aberdeen	1	
Arbroath	2	
Banff	1	
Dunbar	1	
Findhorn	1	
Fraserburgh	2	
Leith	1	
Littleferry	1	
Macduff	2	
Montrose	4	
Peterhead	2	
St. Andrews	1	
Speymouth	1	
Wick	3	
Ythan (River)	3	
		26
Unknown		2
Total		131

TABLE 4.—Wrecks and Casualties occasioning Loss of Life; distinguishing Loaded Vessels from Vessels in Ballast, and showing the Description of each Vessel and Cargo, the Number of Lives Saved and Lost in each Case, and the Date and Place of each Casualty.

(*a*) LOADED VESSELS:

No. in Return.	Name of Ship and Age when known.	Rig.	Tons.	Men.	Cargo.	Loss on Property, whether total or partial.	No. of Lives lost.	Date of Casualty.	Place.
1	Emblem - -	Schooner	70	5	Barley - -	Total.	5	1856 : 1 January	Cockenzie.
7	Catherine - -	Schooner	61	3	Coals - -	Total.	3	6 February	Off Granton.
8	Annie - - -	Sloop	33	3	Coals - - -	Total	3	6 February	Elie Harbour.
9	Commercial Packet -	Sloop	32	3 &Pilot.	Manure - -	Total.	4	7 February	Aberlady.
28	Ahti, 5 years - -	Schooner	120	7	General - -	Total.	6	16 Sept. -	Dunnetthaven.
36	Amazone, 9 years -	Bark	258	11	Iron - -	Partial.	3	11 Nov. -	Off Leith.
52	Svende Sodskinde -	—	59	4	Wheat - -	Total.	4	1857 : 4 January	Schoughall Rocks.
55	Maria Annette -	Sloop	50	4	Wheat and Tares -	Total.	4	4 January	Schoughall Rocks.
78	Happy Return, 57 years	Schooner	63	4	Coals - -	Partial.	1	29 March	25 Miles E S.E. of Stonehaven.
83	Hilldine Annette -	Schooner	80	6	Battens - -	Total.	6	31 March	Sea.
84	Unknown - -	Schooner	90	6	Timber - -	Total.	6	1 April -	Sea.
90	Landbourne - -	Smack	61	5	Coals - - -	Partial	5	16 April -	Isle of May.
106	Earl of Clarendon, 1 year	Schooner	83	5	Coals - -	Total.	2	15 August	Macduff.
119	Janet and Ann, 13 years	Schooner	19	3	Timber - -	Total.	3	23 Nov. -	Banff.
124 125	2 Fishing Boats -	—		18	Nets and Fish -	—	18	November	Port Knockie.
126 127	2 Fishing Boats -	—	40	43 { 17	Nets and Fish - -	—	17	November	Buckie.
128	1 Fishing Boat -	—		8	Nets and Fish -	—	8	November	Port Gordon.
	Total, 19 Vessels.		1119	113	Total Losses, 16. Partial Losses, 3.		98		

(*b*) VESSELS IN BALLAST:

No. in Return.	Name and Age of Ship, when known.	Rig.	Tons.	Men.	Colliers in Ballast marked C, other Vessels B.	Loss on Property.	No. of Lives lost.	Date of Casualty.	Place.
10	Margaret, 10 years -	Schooner	72	5	C	Total	5	1856. 7 Feb.	East Coast.
50	Maria, 17 years -	Brig -	274	10	C	Partial	1	1857. 4 Jan.	Off Isle of May.
54	Cromarty - -	Schooner	111	5	B	Total -	5	4 Jan.	Cat Craig.
	Total, 3 Vessels		457	20	Total Losses, 2. Partial Losses, 1.		11		

(*c*) VESSELS WHETHER LOADED OR IN BALLAST UNKNOWN:

No. in Return.	Name and Age of Ship, when known.	Rig.	Tons.	Men.	Ballast or Cargo.	Loss on Property.	No. of Lives lost.	Date of Casualty.	Place.
6	Unknown * - -	Schooner	76	3	Unknown.	Total -	3	6 Feb.	Inchkeith.
20	Unknown * - -	—	100	5	Unknown.	Total -	supposed all, say 5.	29 Apr.	Island of May.
	Total, 2 Vessels		176	8	Total Losses, 2.		8		

TABLE 5.—Wrecks and Casualties, showing the Total Tonnage of the Vessels, and the Total Number of Hands on Board: and distinguishing Loaded Vessels from Vessels in Ballast; the Number of Hands employed, and the Number of Lives Saved and Lost in each case; and Casualties occasioning Loss of Life from other Casualties.

—	Casualties occasioning Loss of Life.					Casualties not occasioning Loss of Life.			Total.				
	No. of Casualties.	Tonnage of Vessels.	Lives Lost.	Lives Saved.	Hands employed.	No. of Casualties.	Tonnage of Vessels.	Hands employed.	No. of Casualties.	Tonnage of Vessels.	Lives Lost.	Lives Saved.	Hands employed.
Loaded Vessels	16 ** 21 †	1,255 ** 1,295 †	63 ** 106 †	15 15	78 ** 121 †	96	12,677	681	112 ** 117 †	13,932 ** 13,972 †	63 ** 106 †	696 ** 696 †	759 ** 802 †
Vessels in Ballast.	3	457	11	9	20	11	1,341	75	14	1,798	11	84	95
Total of Loaded Vessels and Vessels in Ballast.	19 ** 24 †	1,712 ** 1,752 †	74 ** 117 †	24 24	98 ** 141 †	107	14,018	756	126 ** 131 †	15,730 ** 15,770 †	74 ** 117 †	780 780	854 ** 897 †

TABLE 6.—PER-CENTAGES.

Description of Vessels.	**Proportion per Cent. that—**				
	Casualties to Vessels with **Cargo** and Vessels in **Ballast** respectively, bear to the whole Number of Casualties.	Casualties occasioning **Total Losses** bear to the whole Number of Casualties.	Casualties occasioning **Partial Losses** bear to the whole Number of Casualties.	Casualties occasioning **Loss of Life** bear to the whole Number of Casualties.	**Lives Lost** bear to the whole Number of Hands employed.
Loaded Vessels	89·3	91·	87·	14·2 or 1 in 7 ** 17·8 or 1 in 5½ †	8·3 or about 1 in 12 ** 13·2 or about 1 in 8 †
Vessels in Ballast	10·7	9·	13·	21·3 or about 1 in 5	11·6 or about 1 in 9
Loaded Vessels and Vessels in Ballast	—	58·8	41·2	15·1 or about 1 in 6½ ** 18·3 or about 1 in 5½ †	8·7 or about 1 in 12 ** 13·0 or about 1 in 7¾ †

** In these cases the per-centages are calculated on the number of vessels and lives lost, exclusive of the fishing boats numbered 124, 125, 126, 127, and 128 in the Return; but including the two vessels and crews marked thus * in Tables 1 and 4, and numbered 6 and 20 in the Return.

† In the second line the five fishing boats above named, as well as the two vessels marked thus *, are included.

TABLE 7.—Wrecks and Casualties, showing the Cargoes of the Ships.

Coals		31
Bones		2
Cotton and Salt		1
Fish, Nets, or Oil		10
General		12
Grain		15
Hemp		1
Iron		7
Lime		5
Manure		3
Carried over		87
Brought over		87
Oatmeal		1
Potatoes		1
Salt		4
Stone		3
Slates		2
Timber		17
Unknown (probably loaded)		2
Colliers in ballast	9	
Other Vessels in ballast	5	
		14
Total		131

TABLE 8.—Wrecks and Casualties, showing the Vessels referred to in the Return annexed, arranged according to the Rig, Tonnage, and Number of Hands on Board.

Rig.		Tonnage.		Hands.	
Barques - -	- 7	60 and under	- 40 vessels.	With 5 and under	- 62 vessels.
Boats (Fishing) -	- 5	100 and under	- 44 „	„ 10 and under	- 50 „
Brigs - -	- 17	200 and under	- 21 „	„ 15 and under	- 9 „
Galliotts - -	- 5	300 and under	- 11 „	„ 20 and under	- 2 „
Hermaphrodites -	- 1	400 and under	- 7 „	„ 25 and under	- 2 „
Ships - -	- 2	500 and under	- 2 „	„ 30 and under	- 0 „
Schooners - -	- 66	600 and under	- 0 „	„ 35 and under	- 2 „
Smacks - -	- 4	700 and under	- 1 „	„ Unknown	- 4 „
Sloops - - -	- 15	800 and under	- 0 „		
Steam Vessels -	- 5	900 and under	- 1 „		
Unknown -	- 4	Unknown -	- 4 „		
Total -	- 131	Total	- 131 „	Total -	- 131 „

TABLE 9.—Wrecks and Casualties, showing the Direction and Force of the Wind at the Time each Casualty happened, and the Number of Casualties which happened in each Month, and at each Degree of Force.

Direction of Wind.

Direction of Wind.	Jan.		Feb.		March.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		Totals.		Grand Total, 1856–7.	Direction of Wind.
	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.		
N. -	.	.	.	.	.	1	.	.	.	.	.	.	.	.	*1	.	.	1	.	.	.	.	.	.	1	2	3	N.
N.N.E. -	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	.	.	.	1	.	1	.	3	1	4	N.N.E.
N.E. -	.	.	.	.	.	.	2	1	.	.	.	.	1	1	.	.	.	.	.	.	.	1	.	.	3	3	6	N.E.
E.N.E. -	.	1	.	.	.	2	.	.	.	.	.	.	.	.	.	1	.	1	1	.	.	.	.	.	1	5	6	E.N.E.
E. -	.	1	.	.	.	1	.	2	.	1	.	.	.	.	.	1	.	.	.	.	.	1	.	.	.	7	7	E.
E.S.E. -	.	6	.	.	.	3	.	.	.	.	.	.	.	.	1	.	2	.	.	.	.	.	.	.	3	9	12	E.S.E.
E. by S. -	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	1	E. by S.
S. E. -	.	3	1	.	.	4	.	2	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	2	10	12	S.E.
S.S.E. -	.	.	.	.	.	2	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	2	3	S.S.E.
S. .	1	1	.	2	.	.	.	.	.	1	.	.	.	.	.	1	.	.	.	.	.	1	.	.	1	6	7	S.
S.S.W. -	.	.	2	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1	.	.	1	2	4	4	8	S.S.W.
S.W. -	.	.	2	.	.	2	.	.	.	1	.	.	.	.	.	.	.	1	.	.	1	.	2	.	5	4	9	S.W.
W.S.W. -	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	1	2	3	W.S.W.
W. -	.	1	1	.	.	.	.	1	.	.	.	.	.	3	.	.	.	.	.	1	.	1	1	.	2	7	9	W.
W.N.W. -	.	.	.	.	.	.	2	.	.	.	.	.	.	1	.	1	1	.	.	2	.	.	1	.	4	4	8	W.N.W.
N.W.byN.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	N.W. by N.
N.W. -	1	.	1	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	2	.	1	.	5	2	7	N.W.
N.N.W. -	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	2	.	2	N.N.W.
Not stated	1	.	1	.	.	2	1	.	.		1	.	.	.	.	1	.	.	.	.	.	5	.	.	4	10	14	Not stated.
Calm -	.	.	.	.	1	1	.	2	.	.	.	.	.	.	.	1	.	.	2	.	.	.	.	.	3	2	5	Calm.
Variable -	1	.	.	.	.	.	.	1	.	.	.	.	.	1	.	.	.	1	.	.	.	.	.	.	1	3	4	Variable.
Total -	4	14	8	3	3	19	5	10	.	4	1	.	2	6	3	7	6	4	3	4	4	10	8	3	47	84	131	Total.

* The wind in this case suddenly changed to E.S.E.

Force of Wind.

Force of Wind.	Jan.		Feb.		March.		April.		May.		June.		July.		August.		Sept.		Oct.		Nov.		Dec.		Total.		Grand Total. 1856–7.	Force of Wind.
	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.		
0 - -	.	.	.	1	1	1	.	.	.	1	.	.	.	2	.	1	1	.	2	.	.	.	.	.	4	6	10	0
1 - -	.	.	.	.	1	1	1	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	2	3	5	1
2 - -	.	.	.	.	.	.	.	1	.	2	.	.	1	.	.	1	.	1	.	.	1	1	.	.	2	6	8	2
3 - -	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	4	4	3
4 - -	.	1	.	.	.	2	.	1	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	2	4	6	4
5 - -	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.	2	.	.	.	.	1	.	.	.	2	3	5	5
6 - -	.	1	.	.	1	2	.	4	.	.	.	.	.	.	1	.	.	.	.	2	.	1	1	.	3	10	13	6
7 - -	1	.	1	1	.	1	1	1	.	.	.	.	.	1	.	1	1	.	.	.	1	.	.	1	5	6	11	7
8 - -	.	.	1	1	.	3	1	.	.	.	.	.	.	1	.	.	1	1	.	.	.	.	.	.	3	6	9	8
9 - -	1	2	.	.	.	2	2	.	.	.	.	.	.	1	.	1	.	1	.	.	1	2	3	1	7	10	17	9
10 - -	1	1	.	.	.	7	.	.	.	.	.	.	.	.	.	.	2	.	1	2	.	.	3	1	7	11	18	10
11 - -	.	8	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	8	9	11
12 - -	.	.	5	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	6	1	.	7	6	13	12
Unknown	1	.	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	2	1	3	Unknown
Total -	4	14	8	3	3	19	5	10	.	4	1	.	2	6	3	7	6	4	3	4	4	10	8	3	47	84	131	Total.

TABLE 9.—*continued*.

FIGURES to denote the FORCE of the WIND.

0.	Calm.		
1.	Light Airs	Just sufficient to give steerage way.	
2.	Light Breezes	With which a Ship with all Sail set and clean full would go in smooth water.	to 2 knots.
3.	Gentle Breeze		to 4 „
4.	Moderate Breeze		5 to 6 „
5.	Fresh Breeze	In which she could just carry in chase, full and by	Royals, &c.
6.	Strong Breeze		Single Reefs and T.G. Sails.
7.	Moderate Gale		Double Reefs and Jib.
8.	Fresh Gale		Triple Reefs, &c.
9.	Strong Gale		Close Reefs and Courses.
10.	Whole Gale	In which she could just bear close-reefed Main Topsail and reefed Foresail.	
11.	Storm	Under Storm Staysail.	
12.	Hurricane	Under Bare Poles.	

THO^{s} GRAY.

VESSELS in DISTRESS (otherwise than by Collision) on the N., N.E., E., and S.E. COASTS OF IRELAND

	Date of Casualty.	Name of Vessel. Port of Registry (if known).	Rig.	Tons.	Men.	From. Bound to.	Cargo.	Wind.		Weather.	Hour and Time of Tide.	Master
								Direction.	Force.			
	1	2	3	4	5	6	7	8	9	10	11	
	1856.											
(1)	Jan. 2	Catherine, of Fleetwood	Schooner	69	5	Dundalk to Lancaster	Oatmeal	E.N.E.	9	Thick	High water	No
(2)	" 2	British Token, of Dundalk	Schooner	54	4	Dundalk to Preston	Grain	S.E.	9	Thick	6 A.M. High water.	No
(3)	" 3	Liska, of Dundalk	Schooner	60	4	Dundalk to Lancaster	Grain	S.E.	9	Thick	High water	No
(4)	" 5	William Thomas, of Newfoundland.	Barque	239	14	Newfoundland to Pamibuco	Fish	N.	12	Clear	Nil	C.S.
(5)	" 5	Tricolor, of Liverpool	Ship	1238	32	Liverpool to Calcutta	Salt	S.S.W.	11	Thick	-	C.S.
(6)	" 6	Gem, of Christiana	Brig	206	10	Alexandria, to Liverpool	Grain	S.S.E.	10	Thick	-	Yes
(7)	" 6	Elvira, of St. Sebastian	Brig	191	12	Liverpool to Havannah	General	E.S.E.	5	Very dark and thick.	9 30	Yes
(8)	" 6	Rialto, of Yarmouth, U.S.	Ship	1100	36	New York to Cork	Grain	W.	12	-	-	No
(9)	" 6	War Hawk, of Liverpool	Barque	209	12	Pernambuco to Cork	Sugar	W.	11	Gales	-	Yes
(10)	" 7	Edward Everett, of Baltimore.	Ship	622	21	Baltimore to Cork	Flour	W.S.W. to W.N.W.	11	Thick	Nil	No
(11)	" 8	Luconia, of New York	Ship	481	15	Liverpool to Charleston	Salt	E.S.E.	10	Cloudy	¾ flood	No
(12)	" 8	Eugene, of Prince Edward's Island.	Brigantine	120	9	Prince Edward's Island to London.	Timber	N.W.	11	Thick	-	Mast
(13)	" 8	Ayrshire Lass, of Ardrossan	Brig	157	8	Alexandria to Cork	Wheat	S.W. to N.W.	12	Thick	-	Yes
(14)	" 9	Choice, of Newcastle	Brig	254	9	Alexandria to Hamburgh	Grain	E.	10	Hazy	-	Yes
(15)	" 10	Elizabeth, of Whitehaven	Brig	-	6	Liverpool to Londonderry	Salt	E.	4	Cloudy	2 A.M. First ¼ flood.	No
(16)	" 11	Shamrock, of Kingstown	Smack	20	2	Skerries to Kingstown	Ballast	N.	6	Clear	¼ ebb	No
(17)	" 11	Alexander, of Waterford	Schooner	164	9	Liverpool to Barcelona	General	N.E.	5	Clear	1 45 A.M. Ebb.	C.S.
(18)	" 11	Vulcan, of Glasgow	Schooner	67	6	Syria to Cork	Kelp	N.	4	Fine	9 30 A.M. High water.	Yes
(19)	" 12	Bideford, of Dartmouth	Brig	141	7	Syra to Queenstown	Grain	N.E.	11	Cloudy	10 A.M.	C.S.
(20)	" 13	Duke of Bronte, of	Barque	423	-	Moulmain to Aberdeen	Timber	W.	9	Thick	-	Yes
(21)	" 14	Dromahair, of Sligo	Brig	376	12	Swansea to Malta	Coals	W.	8	Squally	-	Mast
(22)	" 14	Undine, of Wexford	Brig	105	7	Glasgow to Marseilles	Pig iron	E.N.E.	9	Clear	2 P.M.	No

ANMORE to CORK inclusive, and on the COASTS of ISLAY and KINTYRE, during the Years 1856 and 1857.

l's Age, and classed yd's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. —— Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
13	14	15	16	17	18	19	20	21	22
s	£100	£400 London	£50	£280 Dundalk.	None	All	Stranded Partial.	on the North Bull. Got off and taken into Dundalk leaky; cargo discharged. Want of lighthouse on the Perches.	Dep. 104 Wr. 179
s	£100	Not	£100	£50 Dundalk.	None	All	Stranded Partial.	on the North Bull. Got off, and taken into Dundalk for repairs. Cargo discharged. Want of light on Perches.	Dep. 106 Wr. 178
s t classed.	£2	Nil	£28	Unknown	None	All	Stranded Partial.	on the bank near Dundalk. Lost sight of lighthouse, and ran out of river. Would not have occurred had there been a light on Perches.	Dep. 105 Wr. 179
t classed.	£6,000	Liverpool	£3,000	Unknown	None	All	Leaky Partial.	Seriously damaged in hull and cargo, while lying to in a hurricane, in lat. 42° 18' N., long. 46° 41' W. Put into Cork for casual repairs, and thence to Liverpool for proper repairs.	Wr. 292 " 339
	Unknown	Unknown	Unknown	Unknown	None		Leaky Partial.	Sprung a leak in lat. 53⅛°, long. 10°; by stress of weather. Cargo shifted, and pumps choked; bore up for Cork for repair.	Wr. 184, 222
ed 2 B.		Norway	Unknown	Unknown	None	All	Leaky Partial.	Stress of weather; vessel much strained, one pump broken, and the other choked; put into Queenstown to discharge cargo.	Wr. 181
d 5 years.	£1,000	Sebastia	£12,000	Unknown	None	All; by our own boat	Stranded Total.	on the Splank Rock off Wexford Coast through thick state of weather, and mistaking lights, and variable winds.	Dep. 99 Wr. 406
	Unknown	Unknown	£1,200		None		Leaky Partial.	Main stem started forward; ship much strained and opened, and pumps choked in lat. 39° 30', long. 41° 20'. 600 barrels flour thrown overboard; stress of weather; put into Cork.	Wr. 250
					None		Dismasted Partial.	strained, leaky, and lost sails in a gale in Irish Channel; put into Queenstown to discharge and repair.	Wr. 314 " 417
	Unknown	United States	£1,200	Unknown	None	All	Dismasted Partial.	in lat. 47° 42' N., long. 50° 20' W., struck by heavy sea, hull spars, sails, and cargo much damaged; put into Cork for repairs.	Wr. 292
	Unknown	Unknown	Unknown	Unknown	None	All	Leaky Partial.	90 miles S.W. of Cork; had 3 feet water in hold, and making 18 miles per hour; put into Cork for repair; stress of weather.	Wr. 119, 172
	Unknown	Yes	None	Not	None	All remained on board	Leaky Partial.	Struck by heavy seas in lat. 43° 5' N., long. 46° 20' W., and sustained very great damage; bore up for Queenstown to repair.	Wr. 245
Star.	£800	Unknown		Unknown	1	7 in the Ship	Dismasted Partial.	and greatly damaged in sails, rigging, hull, and cargo, having been thrown on her beam ends in a hurricane in lat. 37° N., long. 8' 30″ W.; put into Cork to refit.	Wr. 453
d 8 years.	Unknown	Unknown	Unknown	Unknown	None	All	Leaky Partial.	Struck by heavy seas 20 miles S.E. of Scilly; leak increasing; men exhausted, bore up for Cork and discharged cargo to repair.	Wr. 194
wn	None	Unknown	None	Unknown	None	All	Stranded Partial.	on McKinney's Bank, near Blackbuoy Lough Foyle. No pilot on board. Got off with slight damage.	Wr. 311
	£30	Nil	Unknown	Unknown	None		Stranded Partial.	on the Horrocks, west side Dublin Harbour; missed stays, and drove on rocks.	Wr. 146
ed Star.	Unknown	Partly London.	Unknown	Unknown	None	All	Stranded Partial.	on Glasgowan Bank, Irish Channel; got off, and put into Waterford, leaky, to discharge cargo; seriously damaged.	Dep. 158 Wr. 173
s A 1.	£1,200	Unknown	£200	Unknown		All	Wrecked Total.	on Port Watty, Ballycastle Bay; missed stays, and having stern way struck on the rocks. Total loss.	Wr. 125 Dep. 200
wn	Unknown	Unknown	Unknown	Unknown	None	All	Dismasted Partial.	in distress, and leaky; struck by heavy sea in lat. 44° 30' N., long. 11° W.; put into Queenstown to discharge part cargo and repair damages.	Wr. 273
s	Unknown	Lloyd's	£140	Unknown	None		Dismasted Partial.	decks swept, and two boats carried away by heavy sea in lat. 40° 49″ N., long. 18° 18″ W.; bore up for Queenstown to refit.	Wr. 216 Dep. 656
s Æ 1. s. 1855.	Unknown	Unknown	Unknown	Unknown	None	All	Leaky Partial.	Stress of weather caused the leak; put into Queenstown to discharge.	Wr. 185
A 1.	£200	Nil	£135	Unknown	None	All	Leaky Partial.	and in distress, having met heavy gales at sea and off Cape Clear; threw quantities of cargo overboard, put into Waterford to repair; stress of weather.	Wr. & dep. 331 " 420

Vessels in Distress (otherwise than by Collision) on the N., N.E., E., and S.E. Coasts of Ireland, from

	Date of Casualty.	Name of Vessels. Port of Registry (if known).	Rig.	Tons.	Men.	From. Bound to.	Cargo.	Wind. Direction.	Wind. Force.	Weather.	Hour and Time of Tide.	Master and Exam
	1	2	3	4	5	6	7	8	9	10	11	12
	1856.											
(23)	Jan. 15	Norfolk, of Sligo	Brig	116	8	Sligo to Liverpool	Oatmeal	S.E.	6	Cloudy	10 P.M.	Yes
(24)	„ 16	St. Domingo, of Oporto	Brig	246	12	Trieste to Cork	Grain	S.S.W.	7	Cloudy	–	–
(25)	„ 16	Josephine, of Bath, U.S.	Ship	456	13	Liverpool to Philadelphia	Salt	S.S.W.	11	Squally	–	No
(26)	„ 17	Windsor Castle, of Liverpool	Ship	782	25	Liverpool to Suez	Coals	W.S.W.	10	Squally	–	Yes
(27)	„ 19	British Empire, of London	Ship	3,011	52	Chincha Island to London	Guano	S.W.	12	–	–	Master-
(28)	„ 20	Horizon, of Kennebank	Ship	1,117	23	Liverpool to New Orleans	General	S.S.W.	6	Very thick	7 30 P.M. High water.	No
(29)	„ 20	Johanna Henrietta, of Amsterdam.	Brigantine	–	–	–	Dyewood	W.	10	Thick	–	No
(30)	„ 21	Airdrie, of Glasgow	Schooner	95	5	Clyde to Oporto	Iron	S.E.	9	Clear	9 15 P.M.	No
(31)	„ 22	Independence, of Bath, U.S.	Ship	1,300	30	Liverpool to New Orleans	Salt	E.	10	Clear	3 A.M.	No
(32)	„ 23	Kathleen, of Portsmouth	Brig	217	8	Alexandria to Londonderry	Wheat	S.E. by E.	9	Hazy and squally.	3 30 A.M. ½ flood.	C.S.
(33)	„ 23	Alciope, of Liverpool	Brig	199	10	Liverpool to Malabar	General	S.S.W.	7	Hazy	3 P.M.	Yes
(34)	„ 25	Will Dargan, of Quebec	Brigantine	136	9	Quebec to Kingstown	Timber	S.W.	11	Stormy	–	Yes
(35)	Feb. 1	Orion, of New York	Ship	844	18	Newcastle to Bermuda	Coals	–	–	–	–	–
(36)	„ 6	Creole, of Londonderry	Barque	455	18	Londonderry to New Orleans	Iron	W.S.W.	12	Squally	8 P.M. 2 hours ebb.	Master-
(37)	„ 6	Spec, of Cork	Brig	120	7	Cardiff to Cork	Coals	S.W.	9	Thick	12 A.M. Dead low water.	Master-
(38)	„ 6	Hope, of Belfast	Brig	148	7	Londonderry to Belfast	Ballast	W.S.W.	10	Hazy	10 30 P.M.	No
(39)	„ 6	Eliza Stewart, of Greenock	Ship	624	21	Newport to Calcutta	Coals and Iron.	S.W.	9	Gales	–	Yes
(40)	„ 6	Augusta Jessie, of Newcastle	Barque	382	14 C.G. on board, 2	Callao to Cork	Guano	W.S.W.	12	Stormy	11 30 P.M. Low water.	Master-
(41)	„ 6	Mobile, of Liverpool	Ship	1,040	28	Mobile to Liverpool	Cotton	W.S.W.	11	Hazy	10 P.M.	Master-
(42)	„ 6	Clyde Vale, of Glasgow	Smack	49	4	Glasgow to Port Ellen	Barley	W.N.W.	10	Hazy	High water	No
(43)	„ 6	Lark, of Leith	Smack	–	–	Glasgow to Ardley	Barley	W.	10	Hazy	11 30 P.M.	No
(44)	„ 7	Lucy Neal, of Preston	Brigantine	96	5	Ballina to Fleetwood	Oats	S.S.W.	12	Thick	2 30 A.M.	No
(45)	„ 7	Martha, of Neath	Ketch	78	6	Neath to Troon	Timber	S.S.W.	12	Thick	12 30	No

rk inclusive, and on the Coasts of Islay and Kintyre, during the Years 1856 and 1857—*continued.*

el's Age, and classed yd's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. — Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
13	14	15	16	17	18	19	20	21	22
rs - -	£800 -	Unknown -	£2,860 -	Unknown	None -	All - - -	Foundered Total.	S. of Redbay Pier, Ballycastle; anchored in bad berth; hove in the larboard chain while vessel listed fast to port; went over on her beam ends and sunk.	Wr. 183 „ 2324 „ 2229 Dep. 188 „ 877 „ 536 } 56
s - -	Unknown	Unknown -	Unknown	Unknown	None -	All - - -	Stranded Unknown	Run ashore in a sinking state at Whitepoint, Queenstown, having sprung a leak in heavy bad weather.	Wr. 172 „ 190
s - - ed at New k.	Unknown	New York -	Unknown	Philadelphia.	1	- - - -	Leaky - Partial.	lost top of mainmast and several sails in a hurricane in lat. 42° N., lon. 34° 40′ W.; pumps choked; bore up for Cork to discharge and repair.	Wr. 189 „ 209
ars - - h Lloyd's.	Unknown	Lloyd's - -	Unknown	Yes -	None -	All - - -	Leaky - Partial.	through stress of weather; pumps choked with fine coals; bore up for Cork to discharge; said to be overloaded; had 1,100 tons of coals on board.	Wr. 185 „ 216
- -	Unknown	London and Liverpool.	- -	- -	None -	- - - -	Leaky - Partial.	and severely strained while lying to at sea; lost sails and boat; bore up for Queenstown to repair.	Wr. 208
s - - . 1.	£9,000 -	Unknown -	Unknown	New Orleans.	None -	23; by own boats -	Stranded Total.	on Arklow Bank, weather very thick; crew finding vessel breaking up, took to boats and got safe into Arklow.	Wr. 202
ars - -	Unknown	Amsterdam -	Unknown	Unknown	3	- - - -	Leaky - Partial.	and in distress in lat. 39° 44′ N., lon. 31° W.; running before the wind; struck by heavy sea, lost three men overboard and sustained heavy damage; put into Queenstown for repairs.	Wr. 432
s - -	- -	- - -	- -	- -	None -	5; in own boats -	Foundered Total.	abreast of Carrickfergus, sprung a leak and became unmanageable, and sunk head first in 6½ fathoms. Total loss.	Wr. 211 „ 278
- - lassed.	£12,000 -	Unknown. Said in Boston.	£300 -	Unknown	None -	All; picked up by "Faugh a Ballagh," S.S.	Stranded Partial.	¼ of a mile N. of Nanny Water River, Drogheda; according to mate, ship ran a W.N.W. course of 115 miles in seven hours, while log only gave 10 miles an hour; ship lost by error in time and reckoning, as well as error in judgment; will be recovered; towed into Liverpool, March 11.	Wr. 221 „ 281 S.G. Feb. 13 „ Mar. 12
assed -	£900 -	Unknown -	£1,500 -	Unknown	None -	All; by ropes from shore.	Stranded Total.	½ a mile from L. H. of Lough Foyle; pilot could not board in the gale; master saw the light and proceeded, but ship would not stay, and there being no room to wear, ship struck heavily and filled. Total loss.	Wr. 231 S.G. Feb. 13
s - lass A 1.	- -	- - -	- -	- -	None -	All - - -	Stranded Partial.	on Barrel Rocks, ¾ mile E. of Ballagan Point during a gale; got off and towed into Carlingford Bay, with 6 feet water in hold; bottom and keel much damaged; want of a pilot.	Wr. 260 „ 277
ths -	Unknown	Quebec -	Nil -	Quebec -	None -	All; in ship - -	Leaky - Partial.	and foremast sprung off St. Lawrence; stress of weather; deficient crew and bad compasses; put into Queenstown to discharge.	Wr. 243
- -	- -	- - -	- -	- -	- -	- - - -	Leaky - Partial.	sprung a leak in lat. 49° N., long. 15° W., during heavy gale of wind; put into Cork to discharge and repair.	Wr. 713
rs - Æ 1.	- -	London -	None -	London -	None -	All - - -	Stranded Partial.	off Moville, heavy gale, at anchor; one chain parted, dragged the other; ship struck heavily, and sprung a leak; got off at high water, and was taken into port to repair.	Wr. 353
rs -	£900 -	Unknown -	£100 -	Unknown	None -	All; by coast guard boat.	Stranded Total.	in Ballyteigue Bay, county of Wexford; filled, and went to pieces an hour after she struck. Total loss.	Wr. 377 „ 694 Dep. 389
rs - Æ.	Unknown	Unknown -	Unknown	Unknown	None -	All. - - -	Dismasted Partial.	and otherwise damaged 10 miles S. of Mull of Cantyre; vessel labouring heavily, was struck by a sea and laid on her beam ends; towed into Ayr.	Wr. 381
rs - A 1.	Unknown	Unknown -	Unknown	Yes -	None -	- - - -	Leaky - Partial.	and in distress, in lat. 49° N., long. 9° 30′ W.; bore up for Cork to discharge and repair.	Wr. 430 Dep. 660
tar -	£3,400 -	Clubs - -	£6,000 -	Newcastle and London.	1	15; by coast guard boat	Stranded Total.	off Ned's Point, Loughswilley, having put in there by stress of weather; struck and sunk; boats all stove; crew took to rigging, and were saved by coast guard; recovered 26 $\frac{4}{12}$. S.G.	Wr. 390 „ 440 Dep. 423
rs - A 1.	- -	- - -	- -	- -	None -	- - - -	Stranded Total.	on Sound of Neve Island, Islay; very greatly damaged; bottom knocked out; masts and sails gone, and cargo discharged on beach; stress of weather.	Dep. 646 Wr. 646
ths -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Stranded Partial.	by stress of weather; broke adrift from her moorings by a hurricane, and driven high on a sandy beach; cargo discharged.	Wr. 644
rs -	- -	- - -	- -	- -	None -	- - - -	Stranded Unknown	at Ardley, Islay; drove during the gale on a reef of rocks; then slipped, and beat over reef, after striking heavily, and tearing away keel.	Wr. 645.
rs -	£100 -	Unknown -	None -	Unknown	None -	- - - -	Stranded Partial.	on mainland, in Sound of Gigha, during a hurricane; nearly on her beam ends; may be got off.	Wr. 429.
-	£30 -	- - -	£30 -	- -	- -	- - - -	Stranded Partial.	on French Point, inside Campbelton Loch, during a hurricane; may be got off.	Wr. 428.

Vessels in Distress (otherwise than by Collision) on the N., N.E., N. and S.E. Coasts of Ireland, from

Date of Casualty. 1	Name of Vessels. — Port of Registry (if known). 2	Rig. 3	Tons. 4	Men. 5	From. — Bound to. 6	Cargo. 7	Wind. Direction. 8	Wind. Force. 9	Weather. 10	Hour and Time of Tide. 11
1856 (46) Feb. 7	Marion, of Wigton	Schooner	70	5	Liverpool to Westport	Salt	W.	11	Hazy	1 A.M.
(47) „ 7	Jean, of Sligo	Schooner	72	5	Liverpool to Sligo	Salt	W.	11	Hazy	1 A.M.
(48) „ 7	Leveret, of Glasgow	Schooner	51	4	Glasgow to Port Ellen	Coals	W.	10	Hazy	3 A.M.
(49) „ 8	Monterez, of Savanna	Ship	600	17	Baltimore to Cork	Flour	S.S.E.	10	Thick	-
(50) „ 12	Proteus, of Sherborne, U.S.	Barque	273	13	Liverpool to Kingston, Jamaica.	General	S.S.W.	9	Thick	6 A.M.
(51) „ 12	J. G. Hall, of Yarmouth, U.S.	Brig	275	10	Ardrossan to Corfu	Coals	S.E.	6	Thick	2 15 A.M.
(52) „ 12	Success, of Belfast	Schooner	51	3	Maryport to Belfast	Coals	S.E.	6	Thick	9 A.M.
(53) „ 12	Margina, of Holland	Galliot	90	5	Liverpool to Seville	Machinery	S.E.	11	Thick	2 A.M. High water
(54) „ 13	Queen, of Belfast	Brig	88	5	Troon to Belfast	Coals	S.S.E.	9	Thick	Low water
(55) „ 17	Rosalie, of Londonderry	Brig	228	10	Newport to Alexandria	Iron	S.S.E.	7	Hazy	-
(56) „ 17	Undine, of New York	Barque	-	-	Liverpool to Smyrna	Coals	S.E.	6	-	-
(57) „ 18	Bess, of Wexford	Schooner	86	6	Liverpool to Wexford	Grain	S.E.	4	Fine	3 30. 1 hour E.W.
(58) „ 18	Io, of Sunderland	Brig	307	10	Athens to Galway	Corn	S.W.	10	Fine	-
(59) „ 22	Catherine, of Brevig	Barque	270	12	Queenstown to Cardiff	Ballast	N.N.E.	7	Thick	9 P.M.
(60) „ 26	Catherine Pemberton, of London.	Barque	319	14	New York to Rotterdam	Rice	S.	11	Rainy	-
(61) March 7	Walton, of Liverpool	Barque	262	13	Liverpool to Para	Coals	E.	5	Thick	-
(62) „ 7	Edgar, of London	Brig	233	4	Alexandria to Trieste	Grain	S.W. by S.	6	Clear	-
(63) „ 12	Passenger, of Sunderland	Barque	277	10	Alexandria to Havre	Wheat	E.N.E.	9	Cloudy	-
(64) „ 13	La Grange, of U.S.	Brigantine	-	-	Cuba to London	Molasses	E.	9	Hazy	-
(65) „ 13	Jane McCrea, of Girvan	Schooner	90	6	Liverpool to Ballina	General	S.S.E.	7	Hazy	10 A.M.
(66) „ 14	Syria, of London	Ship	502	18	New York to Cork	Grain	E.S.E.	10	Gale	-
(67) „ 15	Waverley, of London	Barque	435	17	Sierra Leone to London	Timber	S.S.W.	12	Hurricane	-

inclusive, and on the Coasts of Islay and Kintyre, during the Years 1856 and 1857—*continued.*

's Age, d lassed 's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. — Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
3	14	15	16	17	18	19	20	21	22
- -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Stranded Unknown.	on Lochindall, Islay, by stress of weather; parted from best anchor, dragged the rest, and drove on the beach; cargo must be discharged.	Wr. 647.
-	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Stranded Unknown.	on Lochindall, Islay; parted both anchors in a heavy gale; drove on the beach, and cargo must be discharged before she can be got off.	Wr. 647.
-	- -	- - -	- -	- -	None -	- - - -	Stranded Unknown.	at Ardley, Islay, by stress of weather; driven on a beach, high and dry; cargo discharged in attempts to get her off.	Wr. 645.
wn -	Unknown	Baltimore -	Unknown	Baltimore	None -	- - - -	Leaky - Partial.	and much damaged, in lat. 51° 31′ N., long. 13° 47′ W. before the wind; struck by heavy sea; vessel sprung leak; cargo damaged; man's leg broken; put into Cork to refit.	Wr. 452. „ 655.
hs -	Total - £3,000.	Nova Scotia -	Total -	Unknown	2	11, by "Sarah," trawler	Stranded Total.	on Blackwater Bank, Arklow, and broke up entirely; heavy gale, thick weather, and in attention to the lead, which was not hove after leaving port.	Wr. 460. Dep. 477. „ 488.
rs - lassed.	£2,750 -	Unknown -	£200 -	Unknown	None -	All, in ship's boat -	Stranded Total.	on' Carskragk Campbelton; very thick weather and, deceived by strong tide; bottom knocked in, and cargo washed out; no lead hove. Total loss.	Wr. 456. Dep. 457.
wn -	£300 -	Unknown -	£35 -	Unknown		2, in smack - -	Stranded Total.	in Stramore Bay, Campbelton; the mainsail having been carried away, vessel unmanageable by stress of weather. Total loss.	Wr. 456. Dep. 458.
- -	Unknown	Holland -	None -	Unknown	None -	- - - -	Stranded Partial.	on Wicklow Sand Bank; sprung a leak; bore up for Holyhead, and run on ground in harbour to ascertain damage.	Dep. 459. Wr. 657.
rn -	Total -	Unknown -	Total -	Unknown	None -	All, by light-house keeper.	Stranded Total.	on Malden Lights S. Rock, Carrickfergus, and broke up; stress of weather and fog, crew got into boat, which was stove in on rocks, and were saved by lighthouse keeper. Total loss.	Wr. 480.
-	Unknown	Lloyd's -	Unknown	Unknown	None -	- - -	Stranded Partial.	on bar at Queenstown, when running in to repair damages and stop leak received in a gale at sea; keel injured and cargo discharged.	Wr. 2, 678 „ 1, 7
- ..	Unknown	Not - -	None -	Unknown	None -	- - -	Leaky - Partial.	off Bardsey Island, through stress of weather and imperfect repairs; put into Queenstown to discharge and refit.	Wr. 640
- lass.	£400 -	£600; Dublin -	£1,200 -	Not -	None -	- - -	Stranded Total.	at Wexford; struck the bar on entering, not sufficient water; became leaky, filled and sunk. Total loss.	Wr. 677 „ 763
-	Unknown	Unknown -	Unknown	Unknown	None -	- - -	Disabled Partial.	in crew; in consequence of the heated state of the cargo obliged to put into Queenstown to discharge,	Wr. 747
- -	£3,000 -	£3,000 -	- -	- -	None -	- - - -	Stranded Total.	on the Barrel Rock, near the Smalls, and broke up; steered proper course, but current setting so strongly upon the rocks, and the weather very thick, could not discern the danger they were in. Total loss.	Dep. & Wr. 695 „ 808
- - loyd's.	Unknown	Lloyd's -	Unknown	Unknown	1	- - - -	Leaky - Partial.	Loss of bulwarks and much damaged by heavy gales in lat. 50° N., long. 20° W.; put into Queenstown to discharge and repair.	Wr. 945
- - l.	Unknown	Lloyd's - -	Nil -	Unknown	None -	- - - -	Leaky - Partial.	Sprung a leak 60 miles N.W. of Scilly; put back to Cork to discharge and repair.	Wr. 862
- - l.	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Distressed Partial.	and leaky; struck by heavy seas about 100 miles from land, which carried away bulwarks and stove her boats; put into Cork to discharge part cargo and repair.	Wr. 864
- - loyd's.	Unknown	Lloyd's - -	Nnknown	Unknown	None -	- - - -	Leaky - Partial.	Sprung leak in lat. 49° 20′ N., long. 6° 30′ W., through stress of weather. Cabin stove, and carried away, much damaged; put into Queenstown to discharge and repair.	Wr. 884
hs -	£500.	Unknown -	None -	Unknown	None -	- - - -	Leaky - Partial.	60 miles off Scilly; strained, sprung mainmast, &c., in cross sea, and heavy gales; put into Cork to discharge and repair.	Dep. 911
- - loyd's.	Unknown	Not - -	Unknown	Liverpool	None -	- - - -	Stranded - Partial.	on a sunken rock off Island of Tory Rutland; dismasted;—hazy weather; kept too close to land; got off much damaged, and cargo discharged.	Dep. & Wr. 893 „ 925
- - d*.	Unknown	Unknown -	Unknown	London -	None -	- - - -	Leaky - Partial.	Bulwarks damaged by continuance of bad weather on homeward passage; put into Cork.	Wr. 1006
- -	Unknown	Unknown -	None -	Unknown	None -	- - - -	Leaky - Partial.	Severely damaged by hurricane in lat. 53° 15′ N., long. 10° 0′ W., which carried away yards, bulwarks, cabin, &c.; put into Cork to discharge and repair.	Wr. 1004

Vessels in Distress (otherwise than by Collision) on the N., N.E., E., and S.E. Coasts of Ireland, from

Date of Casualty. 1		Name of Vessels. — Port of Registry (if known.) 2	Rig. 3	Tons. 4	Men. 5	From — Bound to. 6	Cargo. 7	Wind. Direction. 8	Wind. Force. 9	Weather. 10	Hour and Time of Tide. 11
	1856.										
(68)	March 16	Abbot, of Arbroath	Barque	245	12	Buenos Ayres to Queenstown.	Bone ash	S. by E.	9	Squally	- -
(69)	„ 24	Helen Hardy, of Shields	Barque	289	10	Glasgow to Palermo	Coals	S.S.E.	9	Gales	- -
(70)	„ 26	Isabella, of Fraserburgh	Schooner	81	6	Newcastle to Dublin	Coals	E.S.E.	11	Clear	6 30 High water.
(71)	„ 29	Antilles, of London	Barque	195	9	Liverpool to Newcastle	Salt	S.E.	7	Hazy	- -
(72)	„ 29	Sesostris, of Skein	Ship	600	18	Cardiff to Barcelona	Coals	E.	6	Breeze	- -
(73)	April 3	Ellen, of Maryport	Brig	190	9	Liverpool to Havre	General	W.N.W.	9	Gales	3 P.M.
(74)	„ 3	Ann Reddin, of Prince Edward Island.	Barque	485	14	Liverpool to Halifax	General	N.	9	Thick	- -
(75)	„ 5	Nautilus, of Killough	Smack	33	3	Dundalk to Killough	Oatmeal	S.W.	9	Thick	10 P.M. High water.
(76)	„ 26	Friends, of Glasgow	Sloop	35	3	Bowling Bay to Belfast	Coals	N.E.	2	Hazy	High water
(77)	„ 26	Jeanies, of Belfast	Schooner	80	4	Maryport to Belfast	Coals	N.E.	4	Thick haze	High water
(78)	„ 27	Patrick, of Wicklow	Smack	12	2	Howth to Wicklow	Stone	N.E. by E.	6	Thick	1 A.M.
(79)	„ 5	Lucy Ring, of United States of America.	Barque	386	11	Monte Video to Liverpool	Hides, Tallow, and Wool.	S.E.	Mod.	1½ year	- -
(80)	May 6	Spray, of Belfast	Schooner	50	4	Glasgow to Strangford	Coals	S.E.	9	Thick	10 A.M.
(81)	„ 7	Racer, of New York	Ship	1,669	50	Liverpool to New York	General	E S.E.	6	Thick, with rain.	2 A.M.
(82)	„ 17	Harriet, of Londonderry	Schooner	76	5	Londonderry to Loch Gilphead.	Oatmeal	N.W.	7	Thick	10 P.M High water.
(83)	„ 20	Commodore, of Greenock	Smack	36	3	Liverpool to Dunfanaghy	General	S.E.	Light	Fine	4 30 P.M. High water.
(84)	June 19	Port, of Maryport	Brigantine	65	4	Maryport to Dublin	Coals	N.E.	8	Thick	2 3 P.M.
(85)	July 5	George A. Hoply, of Charleston.	Ship	549	16	Liverpool to Charleston	General	N.	10	Squally, Cloudy.	12 midnight
(86)	„ 19	Express, of Weymouth	Ketch	75	5	Glasgow to Rouen	Iron	S.W.	11	Thick	- -
(87)	Aug. 5	William McCormick, of Londonderry.	Schooner	379	28	Liverpool to Londonderry	General	Calm	-	Thick fog	7 30 A.M.
(88)	„ 10	George, of Leith	Barque	676	20	Liverpool to Quebec	Salt	S. ½ E.	6	Hazy, rainy, and squally.	4 P.M.
(89)	„ 10	James Stewart, of Greenock	Brig	239	13	Greenock to Newfoundland	General	E.	10	Thick	High water
(90)	„ 10	Flora, of Drogheda	Brig	100	6	Ardrossan to Fleetwood	Pig Iron	E.	6	Thick, with rain.	11 P.M.

k inclusive, and on the Coasts of Islay and Kintyre, during the Years ending 1856 and 1857—*continued.*

's Age, nd classed d's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage,	Site and Cause of Casualty. — Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
13	14	15	16	17	18	19	20	21	22
-	Unknown	Unknown	Unknown	Unknown	None	- - - -	Leaky - Partial.	by stress of weather at sea; put into Queenstown to discharge and repair.	Wr. 931
- ed".	Unknown	Shields	Unknown	Glasgow	None	- - - -	Leaky - Partial.	Sprung a leak 7 miles off the Tuskar light, by stress of weather; put into Queenstown to refit, discharge, and repair.	Wr. 944
, 8 years	Unknown	Unknown	Unknown	Unknown	None	- - - -	Stranded-Partial.	on Ardnahow Point, Sound of Islay; stress of weather; wind blowing a hurricane; drove her on rocks, where she filled, listed, and fell over; will be recovered.	Dep & Wr. 1019
-	Unknown	Yes	Unknown	Unknown	None	- - - -	Leaky - Partial.	in lat. 51° 20′ N. and long. 16° 0′ W.; stress of weather; very heavily strained and making much water; put into Queenstown to discharge and repair.	Wr. 984
-	Unknown	Norway	Unknown	Unknown	None	- - - -	Leaky - Partial.	Trevose light bearing S.S.E. 10 miles; put into Queenstown to discharge and repair.	Wr. 987
- 1.	Unknown	Unknown	Unknown	Unknown	None	- - - -	Leaky - Partial.	Sprung a leak in lat. 51° N. long. 16° 31′ W., owing to the heavy labouring of the vessel. Put into Queenstown to discharge and repair.	Wr. 1041
-	Unknown	Unknown	Unknown	Unknown	2	- - - -	Dismasted Partial.	and seriously damaged in gales off the Skerries, by Rathlin Island; put into Belfast to discharge and repair.	Dep. 1092 Wr. 1100
-	£200	Nil	£600	£600 Dublin.	None	- - - -	Stranded Total.	¼ mile N. of St. John's Point, county Down, having a rotten tiller, which broke off in rudder head when close in to the land; before stump could be got out vessel ran on shore. Total loss.	Wr. 1074
-	£160	Not	£25	Unknown	None	3, by own boat	Stranded Total.	on McCammon Rocks in Portavagie Bay, Donaghadee; hazy weather and was drifted south by the tide more than allowed for; went to pieces.	Dep. and Wr. 1248 „ 1234
-	£300	Unknown	£40	Unknown	None	4, by coast guard and fishing boats.	Stranded Total.	on the Long Rock, 1 mile N.E. of Ballywalterspin, Donaghadee, the weather being very thick, and not enough allowance made for the tide.	Wr. 1248
-	£20	No	£4	Not	1	1, by clinging to wreck	Stranded Total.	at entrance of Wicklow harbour by stress of weather; had recognized Wicklow Head lights.	Wr. 1232
-	£7,000	Unknown	£33,000	London	None	- - - -	Burned - Partial.	When off Mine Head, cargo discovered to be on fire; left the ship and returned again on the flame abating; battened down hatches and ran her for Wateford, where she was scuttled and recovered.	Dep. and Wr. 1294 „ 1360 „ 1362
-	£150	Unknown	Unknown	Unknown	None	- - - -	Stranded-Partial.	on the Rock Angus, near Strangford, when entering the harbour by stress of weather, and no light exhibited on shore to point out the danger; floated off after discharging cargo.	Wr. 1324 Dep. 1270 Wr. 1339
-	£16,000	United States	Unknown	Unknown	1	627, by the Arklow fishing smacks.	Stranded Total.	on Arklow Banks, weather being thick and allowance not made for strong tides; the lead had not been hove; all passengers saved and part cargo.	Wr. 1296
-	-	Unknown	Unknown	Unknown	None	- - - -	Stranded-Partial.	on Island of Devar, near entrance to Campbelton Bay, while tacking for shelter missed stays, and not being able to wear round ran ashore; will be got off on cargo being discharged.	Wr. 1356
wn	£5	Unknown	£50	£300 London	No	- - - -	Stranded Partial.	on Green Island, Dunfanaghy; and very light, helm would not answer, nor keep her away; got off after discharging cargo.	Wr. 1438
-	Considerable.	Unknown	None	Unknown	None	4, in own boat and coast guard.	Stranded Unknown.	on Ship Rock 1 mile E.N.E. of Ballyferris Point; thick weather; no land in sight since noon; lead not hove; compasses supposed to have been affected by attraction.	Wr. 1451 Donaghadee
- 1.	£6,000	England and America. £6,000	Unknown	Unknown	None	8, by fishing boats, 8 by own boats.	Stranded Total.	on the West Strand at Port Stewart, county Antrim, in consequence of the suddenness of the gale and shift of wind; the vessel was embayed, and could not work off shore, having lost her canvass. Total loss.	Wr. 1573 „ 1581
-	£70	No	Nil	Unknown	None	- - - -	Leaky - Partial.	off Waterford through stress of weather and heavy sea; had to discharge.	Dep. 1635
- 1.	Unknown	Unknown, London and Dublin.	Unknown £1,000	Unknown Yes.	None	2 - - -	Stranded Unknown.	7 miles west of Innishowen, being thick fog and vessel on wrong course; had not seen Sheep Head or Bangor Head, which would have caused course to have been altered; lead not hove.	
- 1.	Unknown £3,500	Leith	Total £300	Unknown	Nil	- - - -	Stranded Total.	on South Rock, 1 mile from Tuskar Rock; rock not marked on the chart which was on board; sunk 10 minutes after striking.	Wr. 1715 „ 2022
ths o. 1.	£5,000	Unknown	Unknown	Unknown	Nil	- - - -	Stranded Unknown.	in Achill Bay, Island of Rathlin; thick weather; blowing strong; no light seen; strong flood tide; compass said to be two points astray.	Wr. 1718 „ 1722 „ 1775
-	Unknown	Unknown	Unknown	Unknown	None	- - - -	Leaky - Partial.	off Mull of Galloway; heavy cross sea running; weather very squally; put into Belfast to discharge and repair.	Wr. 1719

Vessels in Distress (otherwise than by Collision) on the N., N.E., E., and S.E. COASTS of IRELAND, from

Date of Casualty.	Name of Vessels. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind.		Weather.	Hour and Time of Tide.
							Direction.	Force.		
1	2	3	4	5	6	7	8	9	10	11
1856 (91) Aug. 10	Fruiterer, of Drogheda	Schooner	62	4	Whitehaven to Dunany	Coals	S.	6	S.	-
(92) „ 25	Henry Holman, of Plymouth	Schooner	158	8	Smyrna to Liverpool	Valonia	E.N.E.	9	Hazy	1 30 P.M.
(93) „ 28	Rover, of Wexford	Schooner	79	6	Ayr to Wexford	Coals	S.S.W.	6	Thick and rainy.	2 A.M.
(94) Sept. 20	Pallas, of Jersey	Brig	164	10	Waterford to Newport	Fish	N.N.W.	4	Cloudy	9 A.M.
(95) „ 26	Thomas Mason, of Bangor	Schooner	51	4	Bangor to Londonderry	Slates	E.S.E.	10	Thick	9 45
(96) „ 27	Brothers, of Kingstown	Brig	120	6	Kingstown to Whitehaven	Ballast	E.S.E.	10	Thick	9 30
(97) „ 27	Greyhound, of Douglas	Schooner	76	6	Lisbon to Douglas	Cork	E.N.E.	10	Thick	A.M.
(98) „ 27	Expert, of Wexford	Smack	48	15	Llanelly to Wexford	Coals	S.S.E.	11	Thick	¼ flood
(99) „ 27	Helena, of Cork	Cutter	35	4	Cork to Cardiff	Grain and 8 passengers.	S S.E.	11	Thick	2 A.M.
(100) „ 27	Irene, of Maryport	Brig	129	6	to Ireland	Timber	E.	10	Hazy	11 A.M.
(101) „ 28	Martin, of Belfast	Schooner	64	4	Maryport to Larne	Coals	N.E.	12	Dark	Low water
(102) „ 28	Wanderer, of Liverpool	Schooner	80	5	Unknown	Coal	E.N.E.	11	Rainy and heavy.	7 30 A.M.
(103) „ 28	Higginson, of Carnarvon	Barque	453	14	Quebec to Wicklow	Timber	N.E.	10	Thick	10 A.M.
(104) „ 28	Robert and Mary, of——	Smack	39	3	Whitehaven to	Coals	E.N.E.	10	Thick	Noon
(105) „ 28	St. Mary, of Dublin	Brig	136	8	Llanelly to Dublin	Coals	N.E.	9	Thick and hazy.	3 20 A.M.
(106) Oct. 1	Pelican, of Drogheda	Brig	80	5	Barrow to Cardiff	Iron	S.	10	Thick	1½ hours flood
(107) „ 5	Dora, of Youghal	Smack	24	3	Dungarvon to Waterford	Wheat	N.W.	4	Hazy	9 A.M.
(108) „ 6	Abeona, of St. John's	Schooner	62	5	Sackville to St. John's	Deals	E.S.E.	9	Thick	6 A.M.
(109) „ 6	Sally, of Strangford	Smack	28	3	Whitehaven to Ardglass	Coals	S.W.	9	Unknown	8 P.M.
(110) „ 7	Chance, Wexford	Brigantine	82	6	Newport to Wexford	Coals	E. by S.	9	Thick	4 A.M.
(111) „ 13	John Campbell, of Liverpool	Ship	624	19	Sunderland to Lisbon	Coals	W.S.W.	10	Moderate	7 P.M.
(112) „ 14	Irrawaddy, of Glasgow	Ship	414	21	Glasgow to Rangoon	General	S.S.E.	8	Thick	9 30
(113) „ 22	Harriett Matilda, of Belfast	Schooner	32	3	Larne to Killebagh	Lime	S.E.	Mod.	Thick	6 P.M.
(114) „ 23	Robert E. Ward, of Newry	Schooner	72	4	Troon to Castlespen	Coals	S.S.E.	5	Thick	-
(115) „ 26	Langgarten, of Dantzig	Ship	624	17	Quebec to Belfast	Timber	S.E.	10	Thick and rain.	11 P.M.

rk inclusive, and on the Coasts of Islay and Kintyre, during the Years 1856 and 1857—*continued.*

l's Age, nd classed rd's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. — Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
13	14	15	16	17	18	19	20	21	22
s lassed.	£350	Not	£60	Not	None	- - - -	Stranded Total.	off Carlingford; should have returned to Whitehaven, having sprung the masthead a few miles from thence: reported to have been lost by want of seamanship and negligence.	Wr. 1800
l.	Unknown	£1,800	None	Unknown	None	- - - -	Dismasted Partial.	off Arklow; having lost rudder, and much damaged in gale of wind; cut away mainmast to prevent her getting on shore; and finally towed into Milford to discharge and repair.	Wr. 1768
loyd's.	£200	Not	£80	Not	None	- - - -	Stranded Partial.	on Button Rock, off Glascarright; want of a proper look out, and neglect in not heaving the lead sooner; partial loss.	Wr. 1787 ,, 1805 ,, 2025
wn lass.	Unknown	Lloyd's	Unknown	Unknown	None	- - - -	Stranded Partial.	abreast of glasshouse in River Suir, Waterford; bad management of pilot not putting vessel about in time.	Wr. 1959
s	Unknown	Bangor	Unknown	Unknown	None	- - - -	Stranded Partial.	near Ballywater, standing to northward; wind headed, and put her on lee shore; wind increasing to heavy gale, could not get off on either tack; to save life, run for beach, and got into Ballywater Harbour with loss of sternpost.	Wr. 1932 ,, 2229
s	Unknown	Not	Unknown	Unknown	None	6 by coast guard boat.	Stranded Partial.	on Skulmartin Rocks, standing to the northward; wind headed; put her on a lee shore, and wind increasing to heavy gale, could not get off on either tack; floated off, and taken into Ballywater Harbour much damaged.	Wr. 1933 ,, 2229
	£700	Not	£800	Yes	None	- - - -	Stranded Partial.	on the West Pier, Dublin, and towed into the inner harbour; bilged; deck loaded with cork, so that the best bower anchor was rendered unserviceable.	Dep. 1906 ,, 1897
ot.	£50	Not	£40	Not	None	- - - -	Stranded Unknown.	1 mile E. of entrance to Wexford Harbour; lost sails by the gale; ran for the shore, and is expected to be got off.	Wr. 1939 ,, 1924
	£250	Not	£150	Not	1	- - - -	Stranded Unknown.	on the Raven, 2 miles north of Wexford, by stress of weather, having no means of saving the lives of the passengers. A woman washed overboard after vessel struck.	Wr. 1924 ,, 2010 ,, 1883
s ed.*	Unknown	Unknown	Unknown	Unknown	None	- - - -	Stranded Unknown.	near Drogheda; heavy gale and thick fog; lead hove; unavoidable.	Wr. 1,969 ,, 1,995
wn	£400	Not	£80	Not	2	3, by coast guard boat and fishermen.	Stranded Total.	off Ballycormick Point by stress of weather; saw the Copelands, but was in doubt as to its being that light. Total loss.	Dep. 1125 Wr. 2211
	Unknown	Unknown	Unknown	Unknown	5	- 1 - -	Stranded Total.	on north point of Colt Island; strong gales blowing, drifted rapidly among the rocks, and in less than 20 minutes became a total wreck.	Wr. 1921
s ed.*	£3,000	£2,500 London.	Unknown	£700 London.	1	12, by pilots and others.	Stranded Total.	near the pier, Wicklow. Vessel at anchor in Wicklow Bay; heavy gale of wind; drove, 3 anchors down, and struck. One man thrown overboard, and drowned. Total loss.	Wr. 1922
	£250	Not	£30	Not	None	3 - - -	Stranded Total.	outside the Eastern Pier, Kingstown; total wreck; terrific sea on; 3 lives.	Wr. 1897
s	£750	£500 Dublin.	£100	Not	None	8, by ropes	Stranded Unknown.	¼ mile from mouth of harbour, Wicklow	Wr. 2023
s ot.	£50	Not	£50	Unknown	None	5, by ropes from shore	Stranded Unknown.	¼ mile south of Watch House, 5 mile point, Arklow; blowing a heavy gale with a heavy sea; crew saved by exertions of coast guard.	Wr. 2223
s ot.	£60	Not	Can't say	Nil	Nil	- - - -	Stranded Unknown.	on the Black Strand of Dungarvon	Wr. 2255
	Unknown	Yes Unknown.	Unknown	Yes Unknown.	None	- - - -	Dismasted Partial.	off Arklow Banks; sails nearly all split, and carried away, and ship much strained; sea breaking on board in heavy gale of wind.	Wr. 2055
wn	Unknown	Not	Unknown	Unknown	None	- - - -	Stranded Total.	at Strangford; running into Ardglass, it came on to blow so hard that she struck the pier head and went on the rocks, shortly after going to pieces.	Dep. 2094
	£20	Unknown	£50	Unknown	None	- - - -	Stranded Partial.	at Wexford under Whitehouse; parted anchors; got off.	Wr. 2123 ,, 2146
	Unknown	Unknown	Unknown	Unknown	None	- - - -	Leaky Partial.	off Innistrahull; put into Moville to discharge and refit.	Dep. 2331
ths 1.	£9,000	Unknown	Unknown	Unknown	3	18 by luggers	Stranded Total.	on Blackwater Bank and drifted to Cahore Point, where she became a wreck; no allowance made by master for the state of the tide.	Wr. 2236
s Not.	£180	Not	£30	Not	No	3, by a boat	Stranded Total.	on Barhall Rocks, Carstoun Point, Strangford Lough, in consequence of a thick fog, and want of light on Rock Angus.	Wr. 2281 ,, 2280 ,, 2303
years.	£500	Not	£40	Not	None	4, by a boat	Stranded Total.	on Plaads Lug Rock, near the Beacon on Rock Angus, from the want of light on the rock.	Wr. 2280 ,, 2319 ,, 2303
ths	Not known	Unknown	Unknown	Liverpool	None	- - - -	Stranded Unknown.	on the west bank of Whitehouse, Carrickfergus; thick weather,	Wr. 1950 ,, 1045

Vessels in Distress (otherwise than by Collision) on the N., N.E., E., and S.E. Coasts of Ireland, from

Date of Casualty.	Name of Vessels. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind.		Weather.	Hour and Time of Tide.
							Direction.	Force.		
1	2	3	4	5	6	7	8	9	10	11
1856 (116) Oct. 27	Endeavour, of Drogheda -	Brig -	99	6	Drogheda to Ayr - -	Limestone	- -	5	Fine -	6 P.M. -
(117) „ 30	Eliza, of Dundee - -	Brig -	245	11	Liverpool to Genoa -	General -	S.W. -	6	Thick -	8 A.M. -
(118) Nov. 10	John, of Belfast - -	Brig -	134	8	Archangel to Belfast -	Tar -	N.N.W. -	10	Dark -	4 30 P.M. -
(119) „ 26	Sker, of Dublin - -	Schooner -	57	5	Ardrossan to Dublin -	Coals -	S. -	6	Snow storm	12 30 A.M. -
(120) „ 29	Strangford, of Belfast -	Schooner -	61	4	Troon to Londonderry -	Coals -	N. -	9	Stormy -	6 A.M. - -
(121) „ 30	Scotia, of Carnarvon -	Schooner -	55	4	Glasgow to Carnarvon -	Iron -	N.E. -	8	Thick and snowy.	6 A.M. - -
(122) Dec. 2	Elizabeth Martin, of Dumfries	Barque	414	16	Liverpool to Singapore -	General -	N. -	5	Clear -	11 A.M. -
(123) „ 5	Margaret, of Cardigan -	Schooner -	73	5	Llanelly to Youghal - -	Culm -	S.S.E. -	0 night.	Thick -	7 30 A.M.
(124) „ 5	J. L. Warner, of New Orleans	Ship -	895	19	New Orleans to Liverpool -	Cotton -	S. -	10	Very thick	6 A.M. - -
(125) „ 5	Princess, of Newry - -	Barque -	479	19	Quebec to Newry - -	Timber -	S.S.W. -	7	Foggy -	6 30 P.M. -
(126) „ 5	Alchymist, of Middlesbro' -	Brig -	275	10	Alexandria to Cork - -	Wheat -	S.W. -	10	Thick -	- - -
(127) „ 6	Cassivelaunus, of Shields -	Barque -	534	20	Liverpool to Calcutta -	Salt -	W.S.W. -	10	Dark and hazy.	4 A.M. - -
(128) „ 6	Importer, of Liverpool -	Ship -	734	22	Newport to Jamaica -	Coals -	S.W. -	11	-	8 30 - -
(129) „ 6	Adriatic, of New York -	Ship -	1,327	29	Liverpool to New York -	General -	S.W. -	10	Thick -	- - -
(130) „ 9	Edwin, of St. Ives - -	Schooner -	108	6	Dublin to Hayle Island -	Stores -	S. -	12	Gale -	5 P.M. -
(131) „ 9	Progress, of Glasgow -	S.S. -	317	19	London to Lisbon - -	Grain -	S. W. -	11	Squally, thick.	- - -
(132) „ 9	Sea Bird, of Halifax -	Brig -	107	7	Wallace, to Liverpool -	Timber -	S.S.W. -	10	Thick with rain.	2 30 P.M. -
(133) „ 9	Elizabeth, of Bergen -	Brigantine	100	8	Galatz to Cork - -	Corn -	S.S.W. -	11	Gales -	11 A.M. -
(134) „ 9	Emerald, of Scarborough -	Brigantine	326	12	Alexandria to Cork - -	Wheat -	S. - -	10	Thick and hazy.	11 A.M. -
(135) „ 9	Petronelle, of Ghent -	Barque -	300	12	Akyab to Ghent - -	Rice -	S.W. -	8 Stormy & hazy.	Hazy -	- - -
(136) „ 9	Catherine, of Liverpool -	Ship -	400	16	Gibraltar to St. Domingo -	Coals and merchandise.	W.S.W. -	11	- -	- - -
(137) „ 9	Ellen, of Cardigan - -	Schooner -	95	6	Gloucester to Kilrush -	Salt -	S.S.W. -	10	Hazy -	11 A.M. -
(138) „ 9	Francois Xavier, of Havre -	Brig -	78	8	Havre to Lisbon - -	General -	S.	10	Hazy -	3 30 P.M. -
(139) „ 9	Blonde, of Belfast - -	Brig -	241	10	Tarangog to Falmouth -	Linseed -	W.S.W.	11	Bad -	5 15 P.M. -
(140) „ 12	Dione, of Stettin - -	Brig -	- -	10	Cardiff to Bordeaux - -	Coals -	S.S.W. -	10	Hazy -	3 P.M. - -

rk inclusive, and on the Coasts of Islay and Kintyre, during the Years 1856 and 1857—*continued.*

l's Age, and classed rd's List. 13	Vessel.		Cargo.		Lives lost. 18	Number of Lives saved, and by what Means. 19	Nature of Casualty, and whether occasioning Total Loss or only partial Damage. 20	Site and Cause of Casualty. —— Remarks. 21	Authority. 22
	Estimated Loss on. 14	Insured for, and where. 15	Estimated Loss on. 16	Insured for, and where. 17					
-	£50	Not	None	Not	None	-	Burned - Partial.	at Drogheda; loaded with limestone, which took fire; ship scuttled to quench it.	Wr. 2312 L. 10906 „ 2
s - A 1.	Unknown	Yes	Unknown	Unknown	None	-	Stranded Partial.	on the Kish Bank; sighted the Skerries; stood on port tack all night, and struck on the bank; got off by "Cambria," S.S.; vessel run much faster than shown by the log.	Wr. 2292
s - E 1.	Unknown	Unknown	Unknown	Unknown	None	-	Stranded Unknown.	on rocks off Copeland, Drogheda	Dep. 2435 „ 2481
s - Not.	-	Not	£20	Unknown	None	-	Stranded Partial.	on Island of Devar, near Campbelton Bay being heavy snow storm, and night very dark; got off, after discharging 40 tons of cargo.	Wr. 2526
wn	Unknown	Unknown	Unknown	Unknown	None	4, by coast guard	Wrecked Total.	at Portrush, trying to avoid the sandbank; dropped anchor, which dragged; struck on S. Pier of harbour, and afterwards filled.	Wr. 2556 „ 2670
rs - M. Bth.	Unknown	£500 Bangor.	Trifling	Unknown	None	-	Stranded Partial.	on the Scullmartin Rocks, through deviation of compass, being laden with iron; weather at the time thick, which prevented Copeland Light being seen; considerably damaged.	Wr. 2554 „ 2559
- ears A 1.	Unknown	London	Unknown	Unknown	None	-	Struck - Partial.	on a sunken rock, 2 miles N.E. by E. from Tuskar, and sprung a leak, which obliged her to run for Milford to discharge and repair.	Wr. 2557
wn	£700	Unknown	£30	Unknown	None	-	Stranded Total.	off Corbally, about 3′ to the westward of Ballymacart head. Thick weather; light and variable winds, by which the vessel drifted; supposed her to be 16′ off the land; no lead hove. Total loss.	Wr. 2593
nths known.	Unknown	Unknown	Unknown	Unknown	Nil	14, by ship's boat, coast guard men, 5 by rocket apparatus.	Stranded Total.	near the Bar Tacamshane; Ship drove ashore after riding 60 hours with masts cut away, and anchors ahead. Total loss.	Wr. 2630 „ 2639 Wexford.
rs - Not.	Unknown	£2,000 St. John's.	Nil	Unknown	None	-	Stranded Unknown.	on O'Meath shore, 2 miles past Warrenpoint; broached too in heavy squall, and as clearing up main top-sail, helm hard a port, took the ground; remains much logged and full of water.	Wr. 2636
rs - Red	Can't say	£2,400 Hartlepool and Stockton.	Unknown	Unknown	None	-	Leaky - Partial.	off E. coast of Ireland, through heavy gales and bad weather; put into Waterford to discharge and repair.	Wr. 2676
s - A 1.	Unknown	Unknown	Unknown	Unknown	2	-	Dismasted Partial.	between Tuskar aud Bardsey; topmast, sails, and rigging all carried away, and two hands killed.	Wr. 2618
wn	£3,500	Unknown	£1,000	Unknown	None	-	Stranded Unknown.	on Ballycotton strand, by stress of weather.	Wr. 2659
- Not.	Unknown	New York	£300	Not	9	-	Stranded Unknown.	on Black Rock, Dungarvon; Had 10 ft. water in the hold when she struck; cargo may be saved; ship doubtful.	Wr. 2686
rs - A 1.	Unknow	Lloyd's	Unknown	Unknown Insured.	None	-	Stranded Unknown.	½ mile S. of Rathmullen; parted from one anchor and broke the other; drove in on the rocks and bilged.	Wr. 2683
s - A 1.	Unknown	Glasgow	40 per cent.	Lloyd's	1	-	Dismasted Partial.	leaky, and greatly damaged, off Old Head of Kinsale; blowing a hurricane, which swept decks, and did great damage; put into Waterford to discharge and repair.	Wr. 2685
r - Not.	£300	Unknown New York.	£100	Unknown	None	-	Stranded Partial.	near the Old Abbey, Dungarvon; lying at anchor, driven ashore by the gale, and sustained much damage; cargo discharged; vessel still remains.	Wr. 2684 „ 2705
rs -	Unknown	Norway	Unknown	-	None	-	Stranded Partial.	on East Beach, Queenstown; drove in the gale with two anchors ahead, and to avoid collision with a barque run on the beach; strained so much that cargo must be discharged.	Wr. 2653 „ 2661
rs -	£2,200	Scarborough £2,200.	Unknown	Unknown	None	12, by rocket lines	Stranded Total.	on Roches Bay, Queenstown; sudden gale made it impossible to make sail on the vessel; she drove into the bay; became a wreck.	Wr. 2675 „ 2812
own	Unknown	Unknown	Unknown	Unknown	6	2, by coast guard	Stranded Unknown.	on N. end of Chisel Village, Wexford; let go anchors with only 30 fathoms cable. Crew too much disabled to make sail, or she might have been saved.	Wr. 2719 „ 2771
ars -	Unknown	£2,000	Unknown	Unknown	None	-	Stranded Unknown.	in the River Liffey; parted from the anchors in a gale of wind.	Wr. 2756
ars - Red*.	£800	Unknown	Unknown	Unknown	None	6, by rockets, and boat	Stranded Total.	in Ballycotton Bay; anchors came home in gale of wind; obliged to slip to save ship and lives.	Wr. 2761
own	Unknown	Unknown	Unknown	Unknown	2	-	Stranded Unknown.	on Guryn's Sand, near Youghal; could not clear the land from the bad state of the weather.	Wr. 2761
ars A 1.	£2,500	West of England £2,500.	£4,000	-	None	-	Stranded Total.	off Fethard's Land, county Wexford, in a lee shore; stress of weather.	Wr. 2769 „ 2790 „ 2816
rs	£2,200	Unknown	£190	Unknown	None	-	Stranded Total.	on the base rocks off Greenore Point, Wexford; running for port of safety with 2 feet water in hold, ship did not steer; struck a rock, and in five minutes filled and sank; crew saved in long boat.	Wr. 2718

Vessels in Distress (otherwise than by Collision) on the N., N.E., E. and S.E., COASTS of IRELAND, from

Date of Casualty.	Name of Vessels. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind.		Weather.	Hour and Time of Tide.
							Direction.	Force.		
1	2	3	4	5	6	7	8	9	10	11
1856 (141) Dec. 16	Effingham, of Cork	Ship	771	21	Bombay to Amsterdam	General	S.S.E. to S.S.W.	10	Variable	
(142) „ 17	Eliza, of Cardigan	Brig	79	6	Llanelly to Milford	Coals	S.W. by W.	5	Rain and thick.	9 P.M.
(143) „ 17	Johanna Kirwan, of Dungawan.	Schooner	67	5	Cardiff to Waterford	Coals	W.	4	Clear	12 30 P.M.
(144) „ 20	Avance, of	Brig	230	9	Belfast to Liverpool	Ballast	W.	2	Clear	
(145) „ 27	Avoca, of Dublin	Barque	298	12	New York to Bristol	Wheat	N.W.	11	Thick and gloomy.	
1857. (146) Jan. 2	Castilian Maid, Wick	Schooner	93	6	Bangor to Lossiemouth	Slates	W. by S.	7	Hazy	12 30 A.M.
(147) „ 4	Lion, of Strangford	Brig	87	5	Workington to Strangford	Coals	E.N.E.	9	Boisterous	2 P.M.
(148) „ 9	James Buchanan, of New Orleans.	Ship	1255	30	Liverpool to New Orleans	Salt	S.S.W.	5	Thick fog	2 A.M.
(149) „ 16	Glenlyon, of New Ross	Ship	908	25	Liverpool to Syra	Coals	N.W.	10	Foul and hazy.	2 A.M.
(150) „ 23	Eliza and Caroline, of S. Shields.	Brig	281	11	Shields to Venice	Coals	W.S.W.	10	Squally	
(151) „ 29	Fingalton, of Hartlepool	Barque	860	23	Liverpool to Shields	Salt	S.W.	9	Squalls, wind and rain.	6 30 P.M.
(152) Feb. 16	Chattahoochee, of Savannah	Ship	1115	27	Liverpool to Savannah	Salt	S.S.E.	5	Thick	7 15 P.M.
(153) „ 20	Margaret Alice, of Milford	Smack	26	3	New Ross to Milford	Granite	S.W.	2	Fine	9 30 P.M.
(154) „ 24	Jane Glassin, of Leith	Barque	758	21	Liverpool to Corfu	Coals	S.W.	10	Heavy	
(155) „ 24	Elinor Grace, of N. Shields	Brig	224	8	Belfast to N. Shields	Ballast	S.S.W.	9	Dark and hazy.	11 30 P.M.
(156) „ 27	Boanerges, of London	Ship	1236	52	Liverpool to Sydney	Cargo and 412 passengers.	S.W.	10	Strong breeze.	
(157) March 8	Stag, S.S., of Glasgow	S.S.	314	28	Glasgow to Belfast	General and 92 passengers.	N.W.	9	Snow storm.	4 30 A.M.
(158) „ 10	Richmond, of Dublin	Schooner	83	5	Ballina to Liverpool	Oats	W.S.W.	7	Clear	8 P.M.
(159) „ 12	Blonde, of Belfast	Smack	19	3	Belfast to Rathmullen	General	N.E.	10	Squally	9 P.M.
(160) „ 12	Maclellans, of Inverness	Smack	47	3	Troon to Londonderry	Coals	S. by W.	7	Cloudy	5.30 P.M.
(161) „ 12	Gwen, of Amlwch	Schooner	85	5	Liverpool to Londonderry	Corn	S.S.W.	9	Hazy	8.30 P.M.
(162) „ 13	Margaret, of Belfast	Smack	31	3	Londonderry to Ballina	Grain	S.W.	9	Squally	12
(163) „ 14	Elizabeth Huddleston, of Waterford.	Schoooner	75	5	Newport to Waterford	Coals	S.S.W.	12	Cloudy	2.45 P.M.

'k inclusive, and on the Coasts of Islay and Kintyre, during the Years 1856 and 1857—*continuea.*

's Age, nd classed d's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. —— Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
13	16	15	16	17	18	21	20	21	22
s lass	Unknown	Unknown	Unknown	Unknown	None	-	Damaged Partial.	by severe weather near Cape Clear; ship strained; cargo damaged and pumps choked; put into Cork for repair.	Wr. 2796
wn	£500	£400 Lloyd's	£10	Unknown	None	-	Stranded Total.	on the strand at Tramore, Waterford; thick weather and strong current.	Wr. 2772 „ 2759
-	Unknown	Not	20 per cent.	Not	None	-	Stranded Unknown	on the Brecaum Bridge, near Slade, Wexford; came too near shore to weather the Hook Light and make Waterford Harbour.	Wr. 2802
-	-	-	-	-	None	-	Stranded Unknown	on Ballyfern Point, through the ignorance of an unlicensed pilot.	Wr. 2825
ths 8 years.	Unknown	Yes. Unknown	10 per cent.	Yes Unknown	None	-	Distressed Partial.	Leaky; and decks swept by continuous bad weather; when off Waterford rudder broke away; lost all command, but succeeded in getting up to passage, greatly damaged.	Wr. 2809
wn	Unknown	Unknown	Unknown	Unknown	-	-	Stranded Partial.	on rocks near S. light, Belfast (Ballyferis point), through the misconception of the master as to his distance from the light owing to the hazy weather; got off and discharged for repairs.	Dep. 20 „ 409
s	£700	£350	£55	Not	None	-	Stranded Total.	east side of N. Angus rock, entrance to Strangford Lough, blowing a heavy gale; ship missed stays, let go anchor, but wind and tide drifted her on the rocks where she now lies.	Wr. 344
hs	£13,000	Unknown	Total	Unknown	None	-	Stranded Total.	off Ballymacart Head, 3 miles off Minehead; weather very foggy; thought they were further from land; lead not hove; total loss.	Wr. 342 „ 628
-	Unknown	Unknown	Unknown	Unknown	None	-	Leaky Partial.	and seriously damaged; 60 miles from Cape Clear, having been struck by heavy seas, which shivered cutwater, and caused her to make so much water as to make it unsafe to proceed; put into Cork.	Wr. 460
- rs	Unknown	Unknown	Unknown	Unknown	None	-	Leaky Partial.	and dismasted by stress of weather at sea, bore up for Cork to discharge and repair	Wr. 560
s Not	Unknown	Unknown	Unknown	Unknown	None	-	Stranded Unknown	¼ mile, S. Tyrella watchhouse, Dundrum Bay; got on shore owing to the great indraft of the current into Dundrum Bay.	Wr. 626
-	£10,000	£12,000. Boston and New York.	£200	Unknown	None	-	Stranded Partial.	on Greenore Point; weather being thick, mistook the S. Bishops for the Tuskar light; did not heave the lead; got off.	Wr. 728
- Not.	£20	Unknown	Unknown	Unknown	None	-	Leaky Partial.	off Dunmore East harbour; could not pump her out; run her ashore in a sinking state; cargo must be discharged.	Wr. 768
wn	Unknown	Lloyd's	Unknown	Unknown	None	-	Leaky Partial.	30 miles from Cork; heavily strained by stress of weather; put into Cork to discharge and repair.	Wr. 754
-	Unknown	Unknown	Unknown	Unknown	1	-	Stranded Total.	on Staimish Beg, Mull of Oe; dark weather and strong currents; went on the rocks, bilged on both sides, full of water, and first gale of wind must break up.	Wr. 852
- A 1.	Unknown	London	Unknown	Unknown	None	-	Dismasted Partial.	100 miles from Cork; blowing strong gale; ship rolled violently; topmasts went over the side; mainmast head split; put into Cork for repair; cargo of iron, stowed in bulk.	Wr. 796
- A 1.	Unknown	Unknown	Unknown	Unknown	None	-	Stranded Partial.	on Black Head, in a snow storm; passed the Maidens; believed her to be abreast of Blackhead; saw land on starboard bow; starboarded helm, but struck on rocks; immediately got off, and into Belfast.	Wr. 838 „ 820
- Not.	Unknown	Unknown	Unknown	Unknown	None	-	Dismasted Partial.	off Innistrahull. Heavy sea running, which carried away her gear; hove to until morning, and then bore up for Longhendale.	Wr. 1007
-	Unknown	Not	Unknown	London	None	-	Stranded Total.	off Ballycastle. Night very dark and missed anchorage; struck among the loose rocks at end of pier; capsized and became a total wreck.	Wr. 865
rs Not.	£250	Nil	£60	Unknown	None	-	Stranded Total.	half mile N. of Innishowen. Smack refused staying three times, and having no room to wear ship struck on the rocks and became a wreck.	Wr. 851 „ 1019
rs A 1.	£30	Bangor	None	Unknown	None	-	Stranded Partial.	near Innishowen Head. Beating up, missing stays, and endeavouring to wear her she drove ashore; was got off with assistance and taken to Londonderry leaky.	Wr. 847 „ 956
rs	£10	Not	Unknown	Yes	-	-	Stranded Partial.	on the Dundine Rock near Sheep Haven. Blowing a heavy gale, and missing stays went ashore; got off, and taken to a place of safety in a sinking state.	Wr. 931
rs Not.	£350	Unknown	None	Unknown	None	-	Stranded Total.	E. of Kilmore Pier. Blowing a hurricane broke away from her moorings and drove ashore, where she is likely to become a total loss.	Wr. 846

Vessels in Distress (otherwise than by Collision) on the N., N.E., E., and S.E. Coasts of Ireland, from

Date of Casualty. 1	Name of Vessels. — Port of Registry (if known). 2	Rig. 3	Tons. 4	Men. 5	From. — Bound to. 6	Cargo. 7	Wind. Direction. 8	Wind. Force. 9	Weather. 10	Hour and Time of Tide. 11
1857. (164) Mar. 14	Atlantic, of Sweden	Ship	617	19	Cardiff to San Francisco	Coals	S.W.	11	Squally	11 P.M.
(165) ,, 14	Thomas, of Liverpool	Barque	858	22	Cardiff to Malta	Coals	W.S.W.	10	Dark and rainy.	2 A.M.
(166) ,, 14	Robina, of Glasgow	Schooner	134	7	Cadiz to Belfast	Wine	S.W.	11	Cloudy	2 A.M.
(167) ,, 16	Athlone, of Liverpool	Barque	484	17	Liverpool to Demerara	Coals	S.S.E.	10	Moderate	3 A.M.
(168) ,, 17	Isabella and Jane, of Bangor	Schooner	62	4	Bangor to Belfast	Ballast	S.S.W.	8	Hazy, with rain.	1 P.M.
(169) ,, 17	Argus No. 2, of France	Schooner	74	6	Liverpool to Goree	General	S.E.	9	Stormy	-
(170) ,, 20	Mary Jane, of Lancaster	Schooner	155	7	East Tarbert to Glasson Dock	Pig Iron	E.S.E.	8	Thick	-
(171) ,, 20	Perseverance, of Belfast	Schooner	98	5	Troon to Cork	Coals	S.S.E.	8	Thick, with rain.	11 P.M.
(172) ,, 20	Gannett, of Cork	S.S.	287	17	Liverpool to Rotterdam	General	S.E.	10	Cloudy	-
(173) ,, 21	Janet, of Ardglass	Sloop	37	2	Dumfries to Tarbert	Grain	E.S.E.	9	Clear	12 5 A.M.
(174) ,, 21	Calpe, of Yarmouth	Schooner	92	6	Liverpool to Bayonne	Corn	S.E.	10	-	-
(175) ,, 28	Emperor, of Liverpool	Barque	368	16	Liverpool to Bahia	General	S.S.E.	6	Thick fog	2 P.M.
(176) ,, 29	Flying Fish, of London	Smack	44	5	Plymouth to Belfast	Ballast	E.S.E.	8	Rain	4 30 A.M.
(177) ,, 29	Commerce, of Ayr	Brig	110	5	Ayr to Dublin	Coals	E.	9	Fresh and hazy.	2 30 A.M.
(178) April 12	Banshee, of Glasgow	Schooner	36	3	Troon to Belfast	Coals	S.E.	7	Thick	2 P.M.
(179) ,, 17	Conquest, of St. John's	Ship	1,046	25	Liverpool to Quebec	Salt	S.S.E.	7	Thick, with rain.	7 30 A.M.
(180) ,, 18	Diamond, of London	Schooner	94	6	Cardiff to Waterford	Coals	S.S.W.	9	Fog	4 15 A.M.
(181) ,, 24	Peveril, of Douglas	Schooner	35	4	Runcorn to Portrush	Salt	-	5	Fair	2 P.M.
(182) May 1	Harriet Wyld, of Ramsay	Barque	202	8	Liverpool to Quebec	Salt	S.S.W.	5	-	-
(183) ,, 18	Lincoln, of Boston	Barque	306	11	Antwerp to Boston	General	S.E.	11	Bad	-
(184) June 2	of Bilboa	Brig	235	13	Glasgow to Bilboa	General	S.W.	10	-	-
(185) ,, 13	Hannah, of Yarmouth	Brig	111	6	Glasgow to Havre de Grace	Iron	S.E.	10	Gale	11 15 P.M.
(186) ,, 30	Whip, of Youghal	Hooker	21	3	Youghal to Cork	Casks	N.N.E.	Moderate.	Fine	4 A.M.

rk inclusive, and on the Coasts of Islay and Kintyre, during the Years 1856 and 1857—*continued.*

l's Age, and classed rd's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. — Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
13	14	15	16	17	18	19	20	21	22
- -	£500 -	Unknown -	Nil -	Unknown	None -	- - - -	Dismasted Partial.	56 miles N.N.E. of Old Head of Kinsale, in a heavy squall; masts went overboard, and quantity of rigging. Bore up for Bristol for repairs.	Wr. 863
- - Dep.	Unknown	Yes - -	Not -	Unknown	None -	- - - -	Dismasted Partial.	40 miles from Cork. Blowing very hard; topmast, main and mizen masts all carried away. Got into Holyhead, and from thence to Liverpool.	Carrickfergus. Wr. 900
- - 1.	Unknown	Unknown -	Unknown	Unknown	1	- Six -	Dismasted Partial.	and sails blown away; decks swept, and cabin destroyed, and everything moveable carried away in heavy gale; man at wheel washed overboard. Put into Belfast to discharge and repair.	Wr. 1168 " 1293
- -	Unknown	Yes - - -	Unknown	Unknown	None -	- - - -	Leaky - Partial.	off the Skerries Heavy gale and sea; shipping much water; straining very much; all hands could not keep her free. Bore up for Belfast to discharge and repair.	Wr. 913
- - Not.	£200 -	Nil - -	Nil -	Nil. -	None -	- - - -	Stranded Partial.	at Orloch Head while in tow of tug S.S., which got her off; she capsized, tow rope breaking, and sea running high, she drifted on shore under Whitehead. Since got off and towed into Belfast.	Wr. 916
-	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Leaky - Partial.	sprung a leak between Liverpool and Cork, in consequence of heavy gales; threw over 700 barrels of gunpowder and 60 bags of rice to lighten her, and put into Cork to discharge and repair.	Wr. 1071
- - ears.	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Stranded	on Crawford's Brun, 3 miles of Bangor, Ireland. Mistaking lighthouse for a vessel, the weather being very thick, got ashore; may be got off.	Wr. 977 " 957
wn -	Unknown	Not - -	Unknown	Not -	None -	- - - -	Stranded Partial.	in Bangor Bay, Donaghadee. Got on rocks through stress of weather; blowing very hard, and being very thick.	Wr. 1031 " 969
- -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Distressed Partial.	between Tuskar and Smalls. Struck by heavy seas which washed over all, from being much overladen; put into Cork to discharge cargo.	Wr. 9978
-	£250 -	Not - -	Unknown	Yes -	None	- - - -	Stranded Total.	in Temple Patrick Bay, 1¼ miles S. of Donaghadee. Carried away main boom in a lee shore, and being improperly manned became a total wreck.	Wr. 977
- -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Leaky - Partial.	off Holyhead. Strong breeze springing up with a cross sea; sounded pumps, found much water, and cargo shifting. bore up for Cork, and discharged for repairs.	Wr. 979
- -	Unknown £5,000.	Unknown -	Unknown	Unknown	None -	- - - -	Stranded Total.	on Blackwater Bank. Ship rolling heavily; masts expected to go over the side. Master and crew left her, and got ashore at Wexford.	Wr. 1065 " 1073
-	£400 -	Not - -	Nil -	Nil -	None -	- - - -	Stranded Total.	¼ mile S. of Dundrum Bar. Got ashore from the thick state of the weather, and the great indraught into the Bay of Dundrum.	Wr. 1149
wn	Unknown	Not - -	Unknown	Unknown	None -	- - - -	Stranded Total.	at Mill Isle, Belfast. Passing through the Copelands the vessel struck on a shoal called the Bridges, and springing a leak was forced to run ashore a complete wreck, where she now lies.	Wr. 1063 " 1069
wn -	Unknown	Not - -	Unknown	Not -	None -	- - - -	Stranded Partial.	on rocks off Mille Isle at 2 o'clock, and remained high and dry at low water. Got off by coast guard.	Wr. 1290
- -	Unknown	Unknown	Nil -	Unknown	None -	- - - -	Stranded Partial.	on Blackwater Bank, Wexford. Lucifer Shoal broken water seen ahead. Ship missed stays; and in act of wearing ran on the shoal, and remained 1¼ hour; when she beat over, and made water freely. Ran for Holyhead for repairs. Lead not hove.	Wr. 1285 " 1260
- -	£700 -	Unknown -	£135 -	Unknown	None -	6, in own boat - -	Stranded Total.	on Ballygranyon, Kilmore, having struck on the Mudjum Reef. Irregularity and strength of tides, and thick weather.	Wr. 1300
wn -	Unknown	Not - -	Unknown	Yes -	None	- - - -	Leaky - Partial.	off Portrush. Water being shallow, pricked on an anchor, which filled and sunk her. Afterwards discharged cargo in a damaged state, and put her in shore to repair.	Wr. 1539
- -	Unknown	Not - -	Unknown	Unknown	None -	- - - -	Leaky - Partial.	off Belfast. Made for Ramsay; put in; shipped new crew; made 17 in. water per hour. Started again at command of owners; and vessel manifesting signs of settling, put back again to save life.	Wr. 1430
wn -	Unknown	Boston - -	Unknown	Unknown	None -	- - - -	Leaky - Partial.	off Scilly Islands. Bore up to examine, and found both masts sprung. Put into Cork to discharge and repair.	Wr. 1426
- -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Leaky - Partial.	in the Channel, in a gale of wind and heavy sea. Kept pumps going until she reached Cork, where cargo discharged for repairs.	Wr. 1441
- -	Unknown	£800 - -	Unknown	Unknown	None -	- - - -	Dismasted Partial.	off St. Agnes Head, by stress of weather. Cut away the wreck. Ship leaked; putinto Cork to discharge and repair.	Wr. 1481
- - Not.	Unknown	Not - -	Unknown	Not - -	None -	- - - -	Stranded Total.	in Roches Bay, Queenstown. Leaky; ran her ashore to save life; broke up at once, being very old and rotten.	Wr. 1541

Vessels in Distress (otherwise than by Collision) on the N., N.E., E., and S.E. COASTS of IRELAND, from

Date of Casualty.	Name of Vessels. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind. Direction.	Wind. Force.	Weather.	Hour and Time of Tide.
1	2	3	4	5	6	7	8	9	10	11
1857. (187) July 7	Bolina, of Liverpool	Barque	408	18	Liverpool to Valparaiso	General	S.E.	8	Heavy	-
(188) 13	Enrichetta, of Genoa	Brig	159	10	Liverpool to Genoa	General	N.W.	10	Thick	-
(189) „ 18	Choice, of Belfast	Brig	226	9	Troon to Constantinople	Coals	-	8	Fine	-
(190) Aug. 3	Margaret, of Belfast	Smack	31	3	Portrush to Troon	Ballast	S.S.W.	6	Cloudy	7 A.M.
(191) „ 12	Waterloo, of Belfast	S.S	328	24	Liverpool to Belfast	General	S.	3	Dense fog	1.45 A.M.
(192) „ 13	Trial, of Carnarvon	Schooner	63	5	Liverpool to Wick	Salt	S. by E.	4	Dense fog	4 A.M.
(193) „ 13	Cuthberts, of Greenock	Barque	852	26	Greenock to Quebec	Coals	S. by E.	4	Dense fog	6 A.M.
(194) „ 15	Borcas, of Flensberg	Brig	243	13	Liverpool to St. John's	General	N.W.	6	Cloudy	-
(195) „ 16	Thomas, of St. John, N.B.	Ship	765	20	Glasgow to Halifax	Machinery	N.W.	2	Dense fog	8.0 A.M.
(196) „ 16	Meander, of Windsor, N.S.	Brig	149	7	Greenock to Halifax	Iron	N.W. by W.	1	Dense fog	10 P.M.
(197) „ 18	Maryflower, of Brixham	Schooner	98	6	Liverpool to	Coals	N.	6	-	-
(198) „ 20	Florence, of Glasgow	Ship	960	31	Greenock to Quebec	Coals	N.W.	3	Dense fog	3.15 P.M.
(199) „ 29	Wilhelmina, of London	Barque	366	14	Cardiff to Simone's Bay	Coals	N.E.	6	Clear	-
(200) „ 31	Roebuck, of Boston U.S.	Ship	869	21	Swansea to Caldera	Coals	W.	6	Clear	-
(201) Sept. 15	James Gibb, of London	Barque	813	20	Quebec to Greenock	Timber	-	8	-	-
(202) „ 15	Sarah, of Liverpool	Schooner	40	4	Newry to Preston	Wheat	W.	3	Variable	8 30 A.M.
203) „ 17	Australia, of Wiscasset	Brig	122	7	Newport to Cardenas	Coals	S.E.	6	Thick	-
(204) „ 19	G. W. Hall, of Providence	Barque	355	11	Newport to N. Carolina	Iron	S.W.	8	Heavy	-
(205) „ 24	Hope, of Newry	Sloop	42	3	Scotland to Newry	Coals	N.W.	8	7	6 P.M.
(206) „ 25	Corval, of Belfast	Smack	24	3	Larne to Strangford	Lime	N.E.	5	Moderate	2 30 P.M.
(207) „ 30	Shannon, of Arklow	Smack	49	4	Gorey to Arklow	Ballast	S.E.	8	Thick	12 30
(208) Oct. 2	Pero, of Liverpool	Brig	231	10	Ardrossan to Naples	Iron	W.S.W.	9	Hazy	-
(209) „ 7	Brothers, of Redbay	Smack	53	3	Ayr to Londonderry	Coals	E.	9	Thick, with rain.	-
(210) „ 9	Henrietta, of Dantzic	Brig	293	10	Glasgow to Stettin	Iron	W.N.W.	8	Thick and rainy.	8 A.M.
(211) „ 16	Ann and Susan, of Carnarvon	Schooner	41	4	Bangor to Portrush	Slates	S.E.	3	Thick	7 P.M.

ork inclusive, and on the Coasts of Islay and Kintyre, during the Years 1856 and 1857—*continued.*

el's Age, and classed yd's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. —— Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
13	14	15	16	17	18	19	20	21	22
-	Unknown	Unknown	Unknown	Unknown	None	- - - -	Leaky Partial.	in Lat. 47° N., Long. 9° W. Sprung a leak; pumps choked; crew refused to proceed. Put into Cork to discharge and repair.	Wr. 1585
n	Unknown	28,000 francs, Genoa.	Unknown	Unknown	None	- - - -	Dismasted Partial.	off the Longships. Heavy weather; thrown on her beam ends; cargo shifted. Bore away for Cork to discharge and repair.	Wr. 1606
	Unknown	Unknown	Unknown	Unknown	None	- - - -	Leaky Partial.	in 9° 3′ W. and 55° 40′ N., pumps incessantly worked; could not keep her free; made for Belfast Harbour to discharge cargo, and free the vessel.	Wr. 1685
s	£150	Not	Unknown	Unknown	None	Three by "Mary" of Ramsay.	Foundered Total.	8 miles from lighthouse in the Mull of Kintyre. Weather heavy; sprung a leak; which could not be kept under; sunk. Total loss.	Wr. 1705
	Unknown	Yes	Unknown	Unknown	None	- - - -	Stranded Partial.	on Burr Point, Ballyhalbert, in a thick fog. Discharged cargo, and was towed off; bilged in several places. Lead not hove.	Wr. 1749 „ 1731
wn Lloyd's	Unknown	Unknown	Unknown	Unknown	None	- - - -	Stranded Unknown.	on Mull of Cantyre; in a dense fog and strong tide. Rudder unshipped. Lead not hove, not supposed to be near the land.	Wr. 1728
wn.	Unknown	Unknown	Unknown	Unknown	None	- - - -	Stranded Unknown.	on Mull of Cantyre; in a dense fog; Rudder unshipped. Strong tides. Put ship ashore. Lead had been hove.	Wr. 1737
	Unknown	Unknown	Unknown	Unknown	None	- - - -	Leaky Partial.	25 miles S. Dungarvon; ship rolling heavily, and shipping much water on deck; found heavy leak under the transom. Put into Cork to discharge and repair.	Wr. 1752
s	Unknown	Unknown	Unknown	Unknown	None	- - - -	Stranded Total.	off the Rhins of Islay; very thick fog. Vessel well in hand; very strong currents. Lead frequently hove. Vessel struck and became total wreck; bilged, and back broken.	Wr. 1792
-	Unknown	£1,000	Unknown	Unknown	None	- - - -	Stranded Partial.	N.W. side Rathlin Island in a dense fog. Lead was hove not more than half an hour before striking. Got off, and put back to Greenock for repairs.	Wr. 1764
-	-	-	-	-	-	- - - -	Leaky Unknown.	off Cork	Wr. 1758
-	Unknown	Unknown	Unknown	Unknown	None	- - - -	Stranded Partial.	off Rathlin Island in a dense fog; saw land only two ships lengths ahead. Hove all aback; came off; making too much water to proceed; put into Troon for repairs and discharge. No soundings to be got.	Wr. 1772
Foreign, l's.	Unknown	£2,000	Unknown	Unknown	None	- - - -	Leaky Partial.	in lat. 48.45 N. long. 11.7 W. labouring and shipping heavy seas. Leak could not be kept under. Bore up for Cork to discharge and repair.	Wr. 1797
yd's	Unknown	Unknown	Unknown	Unknown	None	- - - -	Leaky Partial.	in lon. 12° W., began two days after leaving Swansea, and ship rolling heavily, increased so much, that crew refused to proceed. Put back to Cork to discharge and repair.	Wr. 1802
	-	-	-	-	-	- - - -	Stranded Unknown.	off St. John's Point, Dundrum	Wr. 1877
	£50	Not	£200	Lloyd's	None	- - - -	Stranded Unknown.	at Narrow Water Castle, Newry. Struck on rocky ground going down the river; not sufficient water at the time of tide.	Wr. 2283
ers	Unknown	Unknown	Unknown	Unknown	None	- - - -	Leaky Partial.	off Lundy Island. Strong gale springing up, sprung a leak, which increasing rapidly, put into Cork to discharge and repair.	Wr. 1874
ers	Unknown	Unknown	Unknown	Unknown	None	- - - -	Leaky Partial.	off Lundy Island. Mainmast and gear all injured by rolling in heavy cross sea; put into Cork to discharge and repair.	Wr. 1878
	Unknown	Unknown	Unknown	Unknown	None	- - - -	Foundered Total.	off the Maiden Rocks; having sprung a leak which could not be kept under, and sunk.	Wr. 1985
	£150	None	£30	Not	None	- - - -	Burned Total.	off Port Langham. The vessel having got on the rocks through the negligence of the pilot, water mixed with the lime, and the vessel took fire and was destroyed.	Wr. 1909
ot.	£100	Nil	Nil	Nil	None	4 by vessel from shore	Stranded Total.	on Arklow Strand. Having parted from her anchors, drove ashore, and went to pieces.	Wr. 2022
ot.	£200	Unknown	£80	Unknown	None	- - - -	Dismasted Partial.	40 miles N. of Innistrahull. Strong gales of wind and heavy seas; put into Stornoway.	Wr. 1989
rn	£200	Not	£200	Not	None	3, by ropes from shore	Stranded Total.	on Blind Burn, Cushenden. Lost sails in the gale; strained, drifted on the rocks, and became total loss.	Wr. 2128
-	£1,000	Hamburg	£2,000	Unknown	None	- - - -	Stranded Total.	on Eskard Rocks, near Tor Head, County Antrim. Sea broke over her with such violence that she sprung a leak; which increasing fast, ran her ashore, and she became total wreck.	Wr. 2086
Æ1.	Unknown	Unknown	Unknown	Unknown	None	- - - -	Stranded Unknown.	in Cariskay Bay, Mull of Kintyre. Night dark, and weather thick, and the master unacquainted with the shore.	Wr. 2181

Vessels in Distress (otherwise than by Collision) on the N., N.E., E., and S.E. Coasts of Ireland, from

Date of Casualty. 1	Name of Vessels. — Port of Registry (if known). 2	Rig. 3	Tons. 4	Men. 5	From. — Bound to. 6	Cargo. 7	Wind. Direction. 8	Wind. Force. 9	Weather. 10	Hour and Time of Tide. 11
1857. 212) Oct. 22	Vulcan, of Wexford	Smack	41	5	Wexford to Newport	Ballast	N.E.	5	Clear	8 30 A.M.
(213) „ 22	Betsey, of Belfast	Schooner	56	4	Belfast to Maryport	Ballast	N.	6	Rainy	9 P.M.
(214) „ 23	Driving Mist, of London	Snow	185	9	Rio Grande to Liverpool	Bones	N.E.	11	Cloudy	- -
(215) „ 27	Albert Edward, of Liverpool	Ship	497	23	Liverpool to Mauritius	Coals	S.E.	8	Thick	- -
(216) „ 29	Ellen, of Aberystwith	Schooner	42	4	Llanelly to Dundalk	Coal	N.N.W.	8	Gales	10 30 P.M.
(217) Nov. 5	Brill, of Nova Scotia	Brig	234	9	Glasgow to Marseilles	Iron	S.S.W.	4	Thick	5.15 A.M.
(218) „ 12	Pioneer, of Liverpool	Schooner	32	3	Balyigranie to Liverpool	Oats	W.	2	Fine	3.45 P.M.
(219) „ 19	Sir Charles Napier, of London	Ship	620	19	Liverpool to Sierra Leone	General	S.S.E.	6	Hazy	5.30 A.M.
(220) „ 28	Lydia, of Fowey	Brigantine	107	6	Ardrossan to Havre	Iron	S.S.W.	5	Thick	11.30 P.M.
(221) „ 28	Lord Seaton, of Sunderland	Barque	416	11	Troon to Malaga	Coals	S.E.	6	Clear	-
(222) Dec. 2	Nero, of P. E. Island	Brigantine	119	7	Bedique to Cardiff	Timber	S.W. and S.S.W.	10	Thick	- -
(223) „ 3	Purtendiada, of Spain	Schooner	155	10	Alfandigo to Liverpool	Fruit	S.W.	9	Thick	8 30 A.M.
(224) „ 3	Jessie, of St. John's	Brig	142	10	Liverpool to St. John's	General	N.N.E.	11	-	- -
(225) „ 26	Thetis, of Strangford	Schooner	56	4	Glasgow to Dundrum	Coals	N.W.	1	Thick	10 P.M.
(226) „ 27	Vron, of Nevin	Schooner	78	5	Glasgow to Rouen	Iron	N.W.	1	Thick	7 P.M.

k, inclusive, and on the Coasts of Islay and Kintyre, during the Years 1856 and 1857—*continued.*

l's Age, nd classed d's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. —— Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
13	14	15	16	17	18	19	20	21	22
wn	-	-	-	-	2	3, by boat from shore	Stranded Unknown.	near Wexford. The boom came over and put 2 men overboard. Wind and sea increasing, chain parted; got up forestaysail, and ran her ashore.	Wr. 2300
-	£100	Not	Nil	Nil	None	-	Stranded Unknown.	on Lukespoint, Bangor, Ireland. Missed stays; tried to anchor; but heavy sea running, she was thrown on the rocks. May be got off.	Wr. 2328
ts	Unknown	Topsham and London.	Unknown	Unknown	None	-	Leaky Partial.	off Tuskar. Blowing furiously; struck by several heavy seas, which strained her very badly. Put into Waterford for survey and repair.	Wr. 2296
-	Unknown	Unknown	Unknown	Unknown	None	-	Leaky Partial.	in the Channel. Leak increasing, bore up for Cork to discharge and repair.	Wr. 2340
-	Unknown	£320	Unknown	Not	None	-	Stranded Unknown.	on St. Patrick's Island, Dublin. Got so far to leeward; and endeavouring to beat up, missed stays, and went on the rocks.	Wr. 2324
hs ot.	£800	£400	£120	Unknown	None	-	Stranded Unknown.	on Arklow Bank. Weather very thick, and cargo having attracted the compass got on shore in a strong tide; split her keel and became leaky.	Wr. 2433
-	£140	Unknown	£175	£350	None	-	Stranded Partial.	near Ballygranie, Lough Swilly. Not answering her helm, and sudden bend in river, went on her beam ends. Cargo discharged.	Wr. 2456
-	£3,000	-	£4,000	-	1	-	Stranded Total.	on the Kish Bank. Sea heavy on the bank. Cut away masts. Lead occasionally hove. Weather thick.	Wr. 2418
wn	Unknown	Unknown	Unknown	Unknown	None	-	Stranded Partial.	on Skullmartin Rock off Ballywater. Weather thick; could not see the Copeland Lights. Got off very leaky, and put into Dublin.	Wr. 2479
wn	-	Yes	Unknown	Unknown	None	-	Leaky Partial.	15 miles off Waterford. Leaky from straining, so badly that crew refused to proceed. Put into Waterford for repairs.	Wr. 2491
hs nown.	Unknown	Bediques	Unknown	Unknown	None	-	Leaky Partial.	off Cape Clear, by stress of weather; pumps choked; in danger of sinking. Put into Waterford to discharge and repair.	Wr. 2512
s	Unknown	Unknown	Unknown	Unknown	None	-	Stranded Partial.	at Kilmore. Anchored in Bay of Ballyteigue, dragged anchors, and drifted; made sail and ran for Kilmore to save life and property; cargo discharged.	Wr. 2498 „ 2591
-	Unknown	Unknown	Unknown	Unknown	None	63 persons from the U.S.S. Northumberland.	Dismasted Partial.	and greatly damaged in a gale at sea. Vessel pooped, and every thing on deck swept away. In this alarming state a signal of distress was seen flying on another vessel. The Jessie bore down to her, and saved 63 persons under circumstances of great difficulty. Jessie put into Cork for repairs, &c.	Wr. 2366
-	Nil	Unknown	Nil	Unknown	None	-	Stranded Partial.	on Barges Rocks off Mill Isle. Ran on shore in thick fog; lead not used.	Wr. 19/58
-	Unknown	Yes	Nil	Unknown	None	-	Stranded Partial.	at Ballyferis point; ran ashore in thick fog; lead not hove.	Wr. 19/58

The Letters and Figures in Column 22 of this Return refer to the Registered Number and the Description of the ocuments from which the Information is extracted:—"Wr." stands for a Wreck Return; and "Dep." for a Depoition, or Statement on Oath made before a Receiver under the 448th section of the "Merchant Shipping Act, 1854."

SUMMARY

OF THE

PRECEDING RETURN OF VESSELS IN DISTRESS (OTHERWISE THAN BY COLLISION)

ON THE N., N.E., E., AND S.E. COASTS OF

IRELAND,

DURING THE YEARS 1856 AND 1857.

TABLE 1.—Wrecks and Casualties, distinguishing Total from Partial Losses, and Vessels with Cargoes from Vessels in Ballast.

Casualties resulting in **total** losses; viz.:		
To Vessels in ballast	5	
To Vessels with cargoes	54	
		59
Casualties resulting in **partial** losses:		
To vessels in ballast	3	
To vessels with cargoes	127	
		130
Casualties, whether resulting in total or partial losses unknown:—		
To vessels in ballast	3	
To vessels with cargoes	34	
		37
Total casualties		226

Loaded vessels, 215,—Vessels in ballast, 11;—or say, as loaded to light :: 20 : 1.

TABLE 2.—Wrecks and Casualties, arranged according to the Places at or near to which they happened; and also according to Districts; and showing the Number in the Return under which each Casualty is to be found.

PLACES.

Arklow, 28. 81. 92. 106. 108. 207. 217	7
Ardley (Islay), 43. 48.	2
Ardnahow (Islay), 70.	1
Angus Rock, Strangford, 80.	1
Achill Bay (Rathlin), 89.	1
Base Rocks (Wexford), 140.	1
Barrel Rocks (Ballagan), 33.	1
Barrel Rock (Smalls), 59.	1
Ballyteigue Bay, 37.	1
Blackwater Bank, 50. 112. 175. 179.	4
Button Rock, 93.	1
Ballywater, 95.	1
Ballycormick, 101.	1
Ballycotton, 128. 137.	2
Brecaum Bridge (Wexford), 143	1
Ballyfern Point, 144.	1
Belfast, 146. 182.	2
Ballymacart, 148.	1
Black Head, 157.	1
Ballycastle, 159	1
Bangor, 170. 171.	2
Ballygranyon, 180.	1
Burr Point, 191.	1
Carried forward	36
Brought forward	36
Blind Burn, 209.	1
Ballygranie, 218.	1
Barges Rock (Mill Isle), 225.	1
Ballyferis Point, 226.	1
Cork, 197.	1
Carrickfergus, 30. 115.	2
Campbelton, 51.	1
Cariskay Bay, 211.	1
Carlingford, 91.	1
Colt Island, 102.	1
Copeland (Drogheda), 118.	1
Corbally, 123.	1
Donaghadee, 173.	1
Dundalk, 3.	1
Drogheda, 31. 100. 116.	3
Devar, I. of, 82. 119.	2
Dublin, 97. 136. 216.	3
Dundine Rock (Sheephaven), 162.	1
Dungarvan, 107. 129. 132. 194.	4
Dundrum, 151. 176.	2
Dunmore (East Harbour), 153.	1
Eskard Rocks (Antrim), 210.	1
Carried forward	68

TABLE 2.—*continued.*

Brought forward	68
French Point (Campbelton), 45.	1
Fethard, 139.	1
Glasgowan Bank, 17.	1
Gigha Sound, 44.	1
Green Island, 83.	1
Greenore Point, 152.	1
Horrocks (Dublin), 16.	1
Innishowen, 87. 160. 161.	3
Innistrahull, 111. 158.	2
Islay, 42. 195.	2
Kingstown Pier, 104.	1
Kish Bank, 117. 219.	2
Kilmore, 163. 223.	2
Lough Foyle, 32.	1
Lochindail, Islay, 46. 47.	2
Long Rock (Donaghadee), 77.	1
Luke's Point (Bangor), 213	1
Maiden Rocks (Carrickfergus), 54. 205.	2
M'Kinney's Bank (Lough Foyle), 15	1
Moville, 36.	1
Mull of Kintyre, 38. 190. 192. 193.	4
M'Cammon Rocks (Portavagie), 76.	1
Mine Head, 79.	1
Mill Isle (Belfast), 177. 178.	2
North Bull, 1. 2.	2
Ned's Point (Lough Swilly), 40.	1
Neve Island (Islay), 41.	1
Newry, 202.	1
Orloch Head, 168.	1
Port Watty, 18.	1
Plaads Lug Rock, 114.	1
Portrush, 120. 181.	2
Port Langham, 206.	1
Carried forward	115

Brought forward		115
Queenstown Bar, &c., 55. 133. 134. 186.		4
Rathlin Island, 196. 198.		2
Redbay Pier, 23.		1
Raven (Wexford), 99.		1
Rathmullen, 130.		1
Staimish Beg (Oe), 155.		1
Skullmartin Rocks, 96. 121. 220.		3
South Rock (Tuskar), 88.		1
Shiprock Ballyferris Point, 84.		1
S. Plank Rock (Wexford), 7.		1
Stramore Bay (Campbelton), 52.		1
Skerries, 74. 167.		2
St. John's Point, 75. 201.		2
Strangford, 109. 113. 147.		3
Tory Island, 65.		1
Tuskar near, 122. 127. 172. 214.		4
Tacumshane Bar, 124.		1
Warrenpoint, 125.		1
Whitepoint, Queenstown, 24.		1
Wicklow, 53. 78. 103. 105.		4
Wexford, 57. 98. 110. 135. 212.		5
West Strand (Port Stewart), 85.		1
Waterford, 86. 94. 142. 145. 221.		5
Youghal, 138		1
SEA, put into Cork and Queenstown, 4. 5. 6. 8. 9. 10. 11. 12. 13. 14. 19. 20. 21. 25. 26. 27. 29. 34. 35. 39. 49. 56. 58. 60. 61. 62. 63. 64. 66. 67. 68. 69. 71. 72. 73. 141. 149. 150. 154. 156. 169. 174. 183. 184. 185. 187. 188. 199. 200. 215. 203. 204. 224.	53	
SEA, put into Waterford, 22. 126. 131. 222.	4	
SEA, put into Belfast, 90, 166, 189	3	
off South-coast, 164. 165.	2	
off Innistrahull, 208.	1	
		63
Total		226

DISTRICTS.

1. From Arranmore to Fair Head, including Rathliu, Islay, and Kintyre, 15. 18. 23. 32. 36. 38. 40. 41. 42. 43. 44. 45. 46. 47. 48. 51. 52. 65. 70. 82. 83. 85. 87. 89. 111. 119. 120. 130. 153. 155. 158. 159. 160. 161. 162. 181. 190. 192. 193. 195. 196. 198. *208. 211. 218. 225.	46
2. From Fair Head to Ballyhalbert Point, 30. 54. 74. 76. 77. 84. *90. 95. 96. 101. 115. 121. 144. 146. 157. *166. 167. 168. 170. 171. 173. 177. 178. 182. *189. 191. 205. 206. 209. 210. 213. 220. 226.	33
3. From Ballyhalbert Point to Howth Head, 1. 2. 3. 31. 33. 75. 80. 91. 100. 102. 109. 113. 114. 116. 118. 125. 147. 151. 176. 201. 202.	21
4. From Howth Head to Wicklow Head, 16. 53. 78. 97. 103. 104. 105. 117. 136. 216. 219.	11
5. From Wicklow Head to Carnsore Point, 7. 28. 50. 57. 81. 88. 92. 93. 98. 99. 106. 108. 110. 112. 122. 127. 135. 140. 152. 172. 175. 179. 207. 212. 214. 217.	26
6. From Carnsore Point to Cork, *4. *5. *6. *8. *9. *10. *11. *12. *13. *14. 17. *19. *20. *21. *22. 24. *25. *26. *27. *29. *34. *35. 37. *39. *49. 55. *56. *58. 59. *60. *61. *62. *63. *64. *66. *67. *68. *69. *71. *72. *73. 79. 86. 94. 107. 123. 124. *126. 128. 129. *131. 132. 133. 134. 137. 138. 139. *141. 142. 143. 145. 148. *149. *150. *154. *156. 163. *164. *165. *169. *174. 180. *183. *184. *185. 186. *187. *188. 194. 197. *199. *200. *203. *204. *215. 221. *222. 223. *224.	89
TOTAL	226

Note.—The Casualties represented by the numbers marked thus * did not in many cases occur within the districts above named. They are, however, either included in the district nearest to which they appear to have happened, or in that to which the vessels were taken after the distress occurred.

TABLE 3.—Wrecks and Casualties, showing the Nature of the Casualties.

Burned	3
Foundered	4
Leaky or dismasted, and otherwise disabled (put in to repair)	81
Stranded or struck on rocks, sands, and bars	138
Total	226

TABLE 4.—Wrecks and Casualties occasioning Loss of Life; distinguishing Loaded Vessels from Vessels in Ballast, and showing the Description of each Vessel and Cargo, the Number of Lives Saved and Lost in each, and the Date and Place of each Casualty.

(a) Loaded Vessels:

No. in Return.	Name of Ship, and Age if known.	Rig.	Tons.	Men.	Cargo.	Loss on Property, whether partial or total.	No. of Lives lost.	Date of Casualty.	Place.
13	Ayrshire Lass, 21 years	Brig	157	8	Wheat	Partial	1	1856: 13 January	At Sea.
25	Josephine, 7 years	Ship	456	13	Salt	Partial	1	16 January	Do.
29	Johanna Henrietta, 2¼ years.	Brigantine.	200	7	Dyewood	Partial	3	20 January	Do.
40	Augusta Jessie	Bark	382	16	Guano	Total	1	6 February	Loughswilley.
50	Proteus, 15 months	Bark	273	13	General	Total	2	12 February	Arklow.
52	Success	Schooner	51	3	Coals	Total	1	12 February	Stramore Bay.
60	Catherine Pemberton, 3 years.	Bark	319	14	Rice	Partial	1	26 February	At Sea.
74	Ann Reddin, 1½ years	Bark	485	14	General	Partial	2	3 April	Skerries, Rathlin Island.
78	Patrick, 30 years	Smack	12	2	Stone	Total	1	27 April	Near Wicklow Harbour.
81	Racer	Ship	1,669	50	General	Total	1	7 May	Arklow Banks.
99	Helena, 3 years	Cutter	35	4 & 8 Pass.	Grain	Unknown	1	27 Sept.	On the Raven, near Wexford.
101	Martin	Schooner	64	4	Coals	Total	2	28 Sept.	Ballycormick Point.
102	Wanderer	Schooner	80	5	Coals	Total	5	28 Sept.	North Point, Colt Island.
103	Higginson, 42 years	Bark	453	14	Timber	Total	1	28 Sept.	Near Wicklow Pier.
112	Irrawaddy, 18 months	Ship	414	21	General	Total	3	14 October	Blackwater Bank.
127	Cassivelaunus, 8 years	Bark	534	20	Salt	Partial	2	6 Dec.	Between Tuskar and Bardsey.
129	Adriatic, New	Ship	1,327	29	General	Unknown	9	6 Dec.	Black Rock, Dungarvon.
131	Progress, 8 years	S.S.	317	19	Grain	Partial	1	9 Dec.	Old Head of Kinsale.
135	Petronelle	Bark	300	12	Rice	Unknown	6	9 Dec.	Wexford.
138	François Xavier	Brig	78	8	General	Unknown	2	9 Dec.	Guryn's Sands, near Youghal.
166	Robina, 19 years	Schooner	134	7	Wine	Partial	1	1857: 14 March	At Sea.
219	Sir Charles Napier, 16 years.	Ship	620	19	General	Total	1	19 Nov.	Kish Bank.
	Total, 22 Vessels		8,360	302	Total Losses Partial Losses Unknown	10 8 4	48		

(b) Vessels in Ballast:

No. in Return.	Name of Ship, and Age if known.	Rig.	Tons.	Men.	Colliers in Ballast marked C, other Vessels B.	Loss on Property, whether partial or total.	Lives lost.	Date of Casualty.	Place.
157	Elinor Grace, 8 years	Brig	224	8	B.	Partial	1	1857: 29 Feb.	Staimish Beg, Mull of Oe.
212	Vulcan	Smack	41	5	B.	Unknown	2	22 Oct.	Near Wexford.
	Total, 2 Vessels		265	13	Partial Loss Unknown	1 1	3		

TABLE 5.—Wrecks and Casualties, showing the Total Tonnage of the Vessels, and the Total Number of Hands on Board: and distinguishing Loaded Vessels from Vessels in Ballast; the Number of Hands employed, and the Number of Lives Saved and Lost in each case; and Casualties occasioning Loss of Life from other Casualties.

—	Casualties occasioning Loss of Life.					Casualties not occasioning Loss of Life.			Total.				
	No. of Casualties.	Tonnage of Vessels.	Lives Lost.	Lives Saved.	Hands employed.	No. of Casualties.	Tonnage of Vessels.	Hands employed.	No. of Casualties.	Tonnage of Vessels.	Lives Lost.	Lives Saved.	Hands employed.
Loaded Vessels	22	8,360	48	254	302	193	56,748	2,115	215	65,108	48	2,369	2,417
Vessels in Ballast.	2	265	3	10	13	9	910	50	11	1,175	3	60	63
Total of Loaded Vessels and Vessels in Ballast.	24	8,625	51	264	315	202	57,658	2,165	226	66,283	51	2,429	2,480

TABLE 6.—PER-CENTAGES.

Description of Vessels.	Proportion per Cent. that—				
	Casualties to Vessels with **Cargo** and Vessels in **Ballast** respectively, bear to the whole Number of Casualties.	Casualties occasioning **Total Losses** bear to the whole Number of Casualties.	Casualties occasioning **Partial Losses** bear to the whole Number of Casualties.	Casualties occasioning **Loss of Life** bear to the whole Number of Casualties.	**Lives Lost** bear to the whole Number of Hands employed.
Loaded Vessels	95·1	90·3	97·4	10·2	2· *1·6
Vessels in Ballast	4·8	9·7	2·6	18·2	4·8
Loaded Vessels and Vessels in Ballast	—	31·9	68·1	10·6	2· *1·7

* In these cases the passengers on board the vessels numbered 99, 156, and 157 in the Return are included.

TABLE 7.—Wrecks and Casualties, showing the Cargoes of the Ships.

Bones and Bone Ash	2
Coals	60
Cotton	2
Culm	1
Cork	1
Dyewood	1
Fruit	1
Fish	2
Guano	2
Granite	1
General	38
Grain	40
Hides, Tallow, and Wool	1
Carried over	152
Brought over	152
Iron	17
Kelp	1
Machinery	2
Molasses and Sugar	2
Salt	18
Slates	3
Stone, Lime, and Limestone	4
Tar	1
Timber	13
Wine	1
Vessels in Ballast	12
Total	226

TABLE 8.—Wrecks and Casualties, showing the VESSELS referred to in the Return annexed, arranged according to the Rig, Tonnage, and Number of Hands on Board.

Rig.	
Barques	37
Brigs	52
Brigantines	11
Cutters	1
Galliotts	1
Hooker	1
Ketches	2
Schooners	57
Sloops	3
Ships	36
Smacks	20
Snows	1
Steamers	4
Total Ships	226

Tonnage.	
60 and under	41 vessels.
100 and under	50 „
200 and under	33 „
300 and under	34 „
400 and under	16 „
500 and under	15 „
600 and under	5 „
700 and under	7 „
800 and under	5 „
900 and under	6 „
1000 and under	2 „
Above 1000	12 „
Total	226

Hands.	
With 5 and under	0 vessels.
„ 10 and under	125 „
„ 15 and under	35 „
„ 20 and under	30 „
„ 30 and under	30 „
„ 40 and under	3 „
„ 60 and under	3 „
Total	226 „

TABLE 9.—Wrecks and Casualties, showing the Number of Casualties which happened in each Month in 1856 and 1857, and the Direction and Force of the Wind at the Time each Casualty happened.

Direction of Wind.

Direction of Wind.	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		Totals.		Grand Total, 1856–7.	Direction of Wind.
	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.		
N.	3	.	.	.	.	.	1	.	.	.	.	.	1	.	.	1	.	.	.	1	1	.	1	.	7	2	9	N.
N.N.E.	.	.	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	1	2	3	N.N.E.
N.E.	2	.	.	.	.	1	2	.	.	.	1	.	.	.	.	1	3	1	.	2	1	.	.	.	9	5	14	N.E.
N.E. by E.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	N.E. by E.
E.N.E.	2	1	.	.	1	.	.	.	.	.	.	.	.	.	1	.	3	.	.	.	.	.	.	.	7	1	8	E.N.E.
E.	3	.	.	.	3	1	.	.	.	.	.	.	.	.	2	.	1	.	.	1	.	.	.	.	9	2	11	E.
E.S.E.	2	.	.	.	2	3	.	.	1	.	.	.	.	.	.	.	2	.	1	.	.	.	.	.	8	3	11	E.S.E.
E. by S.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	.	1	E. by S.
S.E.	4	.	5	.	1	3	.	1	3	1	.	1	.	1	1	.	.	2	2	2	.	1	.	.	16	12	28	S.E.
S. by E.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	1	2	3	S. by E.
S.S.E.	1	.	3	1	2	3	.	1	.	.	.	.	.	.	.	.	2	.	2	.	.	1	2	.	12	6	18	S.S.E.
S.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	1	1	.	.	1	.	1	.	4	.	8	2	10	S.
S.S.W.	5	1	3	1	1	3	.	1	.	1	.	.	.	.	1	1	.	.	.	.	.	2	5	.	15	10	25	S.S.W.
S.W.	3	1	3	2	.	3	1	.	.	.	.	1	1	.	.	.	.	1	2	.	.	.	5	2	15	10	25	S.W.
S.W. by W.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	1	S.W. by W.
W.S.W.	2	1	4	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	1	1	.	.	3	.	10	4	14	W.S.W.
S. by W.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	S. by W.
S.W. by S.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	S.W. by S.
W.	5	.	4	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	1	2	.	11	3	14	W.
W. by S.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	W. by S.
W.N.W.	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	2	1	3	W.N.W.
N.W. by W.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1	1	N.W. by W.
N.W. by N.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	N.W. by N.
N.W.	1	1	.	.	.	1	.	.	1	.	.	.	.	1	.	3	.	1	1	.	.	.	1	2	4	9	13	N.W.
N.N.W.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	1	.	.	.	2	1	3	N.N.W.
Not stated	.	.	1	.	.	.	.	1	.	.	.	.	.	1	.	.	.	1	1	.	.	.	.	.	2	3	5	Not stated.
Calm	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1	.	1	Calm.
Variable	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Variable.
S.E. by E.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	S.E. by E.
Total	34	6	26	5	12	21	6	4	5	2	1	3	2	3	7	11	12	7	12	9	4	5	24	5	145	81	226	Total.

Force of Wind.

Force of Wind.	Jan.		Feb.		March.		April.		May.		June.		July.		August.		Sept.		Oct.		Nov.		Dec.		Totals.		Grand Total. 1856–7.	Force of Wind.
	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.		
Light	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	Light.
Force 0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	1	Force 0
„ 1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	2	.	3	3	„ 1
„ 2	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	1	.	1	.	.	.	1	1	.	2	4	6	„ 2
„ 3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	1	.	.	.	.	.	3	3	„ 3
„ 4	2	.	1	.	.	.	1	.	.	.	.	.	.	.	.	2	1	.	1	.	.	1	1	.	7	3	10	„ 4
„ 5	2	1	.	1	1	.	.	1	.	1	.	.	.	.	.	.	.	1	2	1	.	1	2	.	7	7	14	„ 5
„ 6	3	.	3	.	2	1	1	.	1	.	.	.	.	.	4	5	.	1	.	1	1	2	.	.	15	10	25	„ 6
„ 7	2	1	2	.	2	2	.	2	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	8	5	13	„ 7
„ 8	1	.	.	.	.	4	.	.	.	.	1	.	.	2	.	.	.	4	2	3	1	.	1	.	6	13	19	„ 8
„ 9	7	2	4	1	4	6	3	1	1	.	.	.	.	.	1	.	1	.	3	2	1	.	.	1	25	13	38	„ 9
„ 10	6	2	6	2	1	5	.	.	.	.	.	2	1	1	1	.	6	.	3	.	1	.	10	1	35	13	48	„ 10
„ 11	7	.	5	.	1	2	.	.	.	1	.	.	1	.	.	.	3	.	.	1	.	.	6	1	23	5	28	„ 11
„ 12	4	.	4	.	1	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	.	11	1	12	„ 12
Unknown	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	2	.	2	Unknown.
Moderate	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	2	1	3	Moderate.
Total	34	6	26	5	12	21	6	4	5	2	1	3	2	3	7	11	12	7	12	9	4	5	24	5	145	81	226	Total.

TABLE 9.—*continued.*

FIGURES to denote the FORCE of the WIND.

0.	Calm.		
1.	Light Airs	Just sufficient to give steerage way.	
2.	Light Breezes	With which a Ship with all Sail set and clean full would go in smooth water.	to 2 knots.
3.	Gentle Breeze		to 4 „
4.	Moderate Breezes		5 to 6 „
5.	Fresh Breeze	In which she could just carry in chase, full and by	Royals, &c.
6.	Strong Breeze		Single Reefs and T. G. Sails.
7.	Moderate Gale		Double Reefs and Jib.
8.	Fresh Gale		Triple Reefs, &c.
9.	Strong Gale		Close Reefs and Courses.
10.	Whole Gale	In which she could just bear close-reefed Main Topsail and reefed Foresail.	
11.	Storm	Under Storm Staysail.	
12.	Hurricane	Under Bare Poles.	

THO^{s} GRAY.

VESSELS in DISTRESS (otherwise than by Colli

Date of Casualty.	Name of Vessel. Port of Registry (if known).	Rig.	Tons.	Men.	From. Bound to.	Cargo.	Wind.		Weather.	Hour and Time of Tide.
							Direction.	Force.		
1	2	3	4	5	6	7	8	9	10	11
1856. (1) Jan. 2	Mary Annie, of Beaumaris	Schooner	53	4	Dublin to Whitehaven	Ballast	S.S.E.	9	Thick fog	9 ½ ebb.
(2) Feb. 11	Enniskillen, of Londonderry	Schooner Steam ship.	401	27	Liverpool to Londonderry	General	S.S.E.	1	Dense fog	10 P.M.
(3) „ 20	Harriett, of Londonderry	Schooner	76	5	Liverpool to Belfast	Corn	E.N.E.	9	Clear	4 A.M.
(4) July 26	Elizabeth, of Strangford	Schooner	32	3	Whitehaven to Killoch	Coals	S.W.	9	Thick	9 A.M.
(5) Dec. 2	John Glaister, of Drogheda	Brigantine	68	4	Fleetwood to Drogheda	Coals	N.N.W.	8	Rainy	6 P.M.
(6) „ 10	Enigma, of Liverpool	Schooner	84	5	London to Liverpool	General	S.W.	11	Thick	1 P.M.
(7) „ 19	Brothers, of Killough	Schooner	59	4	Runcorn to Newry	Salt	W.S.W.	6	Stormy	High water
(8) „ 26	Alitus, Irvine	Brig	194	7	Dubliu to Ardrossan	Ballast	N.E.	11	Thick	1 P.M.
1857. (9) Jan. 4	Factor, of Maryport	Schooner	125	6	Maryport to Belfast	Coals	E.	11	Clear	5 30 P.M.
(10) „ 20	Eclipse, of Whitehaven	Schooner	106	6	Dublin to Whitehaven	Ballast	S.W.	10	Rainy	High water
(11) March 11	Samuel, of Liverpool	Schooner	83	4	Ardrossan to Runcorn	Iron	S.	6	Hazy	8 A.M.
(12) „ 15	George Jordan, of Liverpool	Schooner	91	4	Liverpool to Bowling	Salt	W.	9	Thick, with rain.	1 P.M.
(13) „ 20	Douglas, of Ramsey	Schooner	82	5	Liverpool to Newcastle	Salt	S.E.	5	Very thick	5 A.M.
(14) „ 20	Village Girl, of Douglas	Smack	16	3	Whitehaven to Castleton	Coals	S.E.	5	Very foggy.	3 30 A.M.
(15) „ 20	Nettle, of Liverpool	Smack	52	3	Runcorn to Douglas	Coals	S.S.E.	7	Hazy and thick.	8 30
(16) „ 20	Countess of Derby, of Douglas	Smack	18	3	Whitehaven to Castletown	Coals	S.E.	5	Very foggy	2 A.M.
(17) „ 31	Mary Houghton, of Liverpool	Schooner	70	5	Liverpool to Larne	Wheat	E.	11	Hazy	-
(18) May 1	Harriet Wyld, of Ramsey	Barque	202	8	Liverpool to Quebec	Salt	S.S.W.	5	-	-
(19) Sept. 2	Ann, of Dundalk	Schooner	81	5	Dundalk to Whitehaven	Ballast	N.	6	Clear	11 A.M.

·TS of the ISLE OF MAN, during the Years 1856 and 1857.

’s Age d lassed ’i’s List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. — Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
3	14	15	16	17	18	19	20	21	22
-	£500	Unknown	-	-	None	All by boat	Stranded - Total.	at Fleswic, near Douglas; could not make Douglas Head Light; total loss; stress of weather; ship missed stays.	Dep. 48 Wr. 69
-	£300	Unknown	Great	Unknown	None	-	Stranded - Partial.	on Mangold Head, being very foggy and probably defective compass. Light wanted on Mangold Head; recovered.	Wr. 440 ,, 719 ,, 1736
-	£200	Not	£200	Unknown	None	-	Stranded - Partial.	at mouth of Ramsey Harbour, having sprung a leak in stress of weather and become waterlogged; was run ashore to save her.	Wr. 733
-	£200	Unknown	Nil	-	–	-	Stranded - Total.	westward of Point of Ayr; weather very bad. Vessel undermanned and badly handled, or should with S.W. wind and flood tide have rounded the Point of Ayr.	Wr. 1695
l.	Total	Not	Total	Not	None	-	Stranded - Total.	in the Bay of Derby Haven, Isle of Man; struck on a reef of rocks not marked in Master's chart, and became a total wreck. Leak kept going.	Wr. 2735
-	£100	£1,000	£150	Unknown	None	-	Stranded - Partial.	on Shellig, north of Ramsay Bay, Isle of Man; lost both her anchors, and stood to sea; could not hold it, and soon afterwards stranded, which saved her from becoming a total loss.	Wr. 2670
n	Unknown	Unknown	Unknown	Unknown	None	-	Stranded - Partial.	on rocks in Bay of Derby Haven; beating into the bay; missed stays; did not obey her helm, and went ashore.	Wr. 2778
ssed.	£290	£500 Glasgow	Nil	-	None	-	Stranded - Partial.	at mouth of Ramsey Harbour; was at anchor in Ramsey Bay; windlass and bitts starting by stress of weather, compelled her to run anchor. Could not keep to sea; ran for harbour, and got ashore.	—
-	£300	£400 Liverpool.	Unknown	Unknown	None	-	Stranded - Partial.	south side of Ramsey Harbour; came to anchorage in Ramsey Bay; not being able to hold, the cable was slipped and she ran for the harbour, and in attempting to take the entrance got ashore.	Wr. 141
-	£1,200	Lloyd's and Whitehaven.	Nil	Nil	None	-	Stranded - Total.	North of Grandel Bay, near Douglas, Isle of Man; stress of weather caused the ballast to shift and vessel to drive on shore, where she went to pieces.	Wr. 513
-	£900	Unknown	£150	Not	None	-	Stranded - Total.	on White Stone Bank, 5 miles N. of Ramsey, beating up channel against wind; to avoid collision with another vessel going before the wind put about vessel, missed stays, and struck.	Wr. 884
-	£75	£800 Lloyd's.	Nil	Unknown	None	-	Disabled - Partial.	off Ramsey, Isle of Man, riding with two anchors down; drifted, carried away the windlass and bitts, and did considerable damage; assisted into Fleetwood to repair.	Wr. 943
-	£300	Not known	£35	Unknown	None	-	Stranded - Total.	in Ramsey Bay; vessel came in with fresh S.E. breeze, very thick weather and a lee shore; lead hove only at ¼ hour intervals; should have been kept constantly going. Total loss.	Wr. 980
-	£50	Not	£60	Not	None	3, by own boat	Stranded - Total.	outside Langless Point, near the landmark, thick fog; vessel struck on the rocks, fell off, and sunk in deep water; lead not hove. Total loss.	Wr. 983.
-	£200	Not	£35	£35 Liverpool.	None	-	Stranded - Total.	at entrance to Douglas Harbour, heavy wind and cross sea running at harbour's mouth, so much injured that she must go to pieces.	Wr. 940.
-	£70	Not	£25	Not	None	3, by own boat	Stranded - Total.	¼ of a mile E. of Santon Head; in thick fog vessel struck on the rock and immediately went to pieces, lead not hove; total loss.	Wr. 984
years.	Unknown	Unknown	Unknown	Yes	5	-	Stranded - Total.	1 mile W. of Kirkmichael Beach, Isle of Man, and all hands lost.	Wr. 1426
-	Unknown	Not	Unknown	Unknown	None	-	Leaky - Partial.	off Belfast, put in; made for Ramsey, shipped new crew, making 17 in. water per hour; started again at command of owners; vessel manifesting signs of settling, put back again to save life.	Wr. 490
ed.	£100	Not	Nil	Nil	None	-	Stranded Partial.	2 miles S.W. of Point of Ayr, sprung a leak which moved the sand ballast, and caused her to settle by the stern and become unmanageable, drifted ashore and was secured.	Wr. 1826

Vessels in Distress (otherwise than by Colli

Date of Casualty.	Name of Vessels. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind.		Weather.	Hour and Time of Tide.
							Direction.	Force.		
1	2	3	4	5	6	7	8	9	10	11
1857. (20) Sept. 30	Friends, of Ross - -	Brig -	192	6	Whitehaven to Newport -	Iron ore	S.E.	8	Thick -	3 A.M. -
(21) Oct. 6	Hugh Lupus, of Liverpool	Schooner	57	4	Whitehaven to Ellesmere -	Iron -	S.W.	7	Clear -	12 night -
(22) Dec. 20	Earl of Carrick, of Ayr -	Steam ship	135	15	Ayr to Liverpool - -	General -	S.W.	10	Dark and rainy.	5 A.M. -

of the Isle of Man, during the Years 1856 and 1857—*continued.*

Age assed 's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. — Remarks.	Authority.
	Estimated Loss on. 14	Insured for and where. 15	Estimated Loss on. 16	Insured for and where. 17	18	19	20	21	22
-	£1,200 -	£500 Dublin -	Unknown	Unknown	1	- - - -	Foundered Total.	in mid-channel off Ramsey, Isle of Man; heavy cross seas, and ship laboured so heavily that she started a butt, and went down.	Wr. 2444
-	£400 -	Not - -	Unknown	Unknown	None -	- - - -	Stranded Total.	off Peel Harbour; heavy sea and squally weather; ran for the harbour, when she struck heavily, filled and sunk. Lead continually hove. Total loss.	Wr. 1998
-	£9,000 -	Unknown - Glasgow.	Unknown	Unknown	13	2—one with life buoy, one by swimming.	Stranded Total.	on Dalby Point, 6 miles from Peel, Isle of Man; struck in a gale; weather dark and rainy; lights not constantly seen; on a lee shore, and went to pieces. Compasses said to be defective.	Wr. 2618

The Letters and Figures in Column 22 of this Return refer to the Registered Number and the Description of the ocuments from which the Information is extracted :—" Wr." stands for a Wreck Return; and "Dep." for a Depoion, or Statement on Oath made before a Receiver under the 448th section of the "Merchant Shipping Act, 1854."

SUMMARY

OF THE

PRECEDING RETURN OF VESSELS IN DISTRESS (OTHERWISE THAN BY COLLISION)

ON THE

COASTS OF THE ISLE OF MAN,

DURING THE YEARS 1856 AND 1857.

TABLE 1.—Wrecks and Casualties, distinguishing Total from Partial Losses, and Vessels with Cargoes from Vessels in Ballast.

Casualties resulting in **total** losses; viz.:—		
To Vessels in ballast	2	
To Vessels with cargoes	11	
		13
Casualties resulting in **partial** losses; viz.:—		
To Vessels in ballast	2	
To Vessels with cargoes	7	
		9
Total Casualties		22

TABLE 2.—Wrecks and Casualties, arranged according to the Places at or near to which they happened; and also according to Districts; and showing the Number in the Return under which each Casualty is to be found.

PLACES.

Dalby Point, 22	1
Douglas Harbour (Mouth of), 15	1
Derby Haven Bay (Isle of Man), 5. 7	2
Fleswic (near Douglas), 1	1
Grandel Bay, N. of (near Douglas), 10	1
Kirkmichael Beach, 17	1
Langless Point, 14	1
Mangold Head, 2	1
Carried forward	9

Brought forward	9
Peel Harbour (off), 21	1
Point of Ayr, 4. 19	2
Ramsay Bay and Mouth of Harbour, 3. 8. 9. 12. 13. 18. 20	7
Santon Head,	
Shellig, N. of (Ramsay Bay), 6	1
White Stone Bank (near Ramsay), 11	1
Total	22

DISTRICTS.

1. From Jurby Point round by the N.E. to Manghold Head, 2. 3. 4. 6. 8. 9. 11. 12. 13. 18. 19. 20.	12
2. From Manghold Head to Calf of Man, 1. 5. 7. 10. 14. 15. 16.	7
3. From Calf of Man to Jurby Point, 17. 21. 22.	3
Total	22

TABLE 3.—Wrecks and Casualties, showing the Nature of the Casualties.

Foundered (at sea or at anchors)	2
Leaky or disabled, put in for repairs or to discharge	4
Stranded or struck on rocks, sands, bars, &c. from various causes	16
Total	22

TABLE 4.—Wrecks and Casualties occasioning Loss of Life; distinguishing Loaded Vessels from Vessels in Ballast, and showing the Description of each Vessel and Cargo, the Number of Lives Lost and Saved in each Case, and the Date and Place of each Casualty.

LOADED VESSELS.

No. in Return.	Name of Ship and Age, if known.	Rig.	Tons.	Men.	Cargo.	Loss on Property, whether total or partial.	No. of Lives lost.	Date of Casualty.	Place.
								1857:	
17	Mary Houghton, 2 years -	Schooner	70	5	Wheat -	Total	5	31 March -	Kirkmichael Beach, Isle of Man.
20	Friends, 59 years - -	Brig	192	6	Iron Ore	Total	1	30 Sept. -	Off Ramsay.
22	Earl of Carrick, 2¾ years -	St. Ship	135	15	General	Total	13	20 Dec. -	Dalby Point, Isle of Man.
Total Vessels - - -		3	397	26	Total Losses	3	19		

TABLE 5.—Wrecks and Casualties, showing the Total Tonnage of the Vessels, and the Total Number of Hands on Board: and distinguishing Loaded Vessels from Vessels in Ballast; the Number of Hands employed, and the Number of Lives Saved and Lost in each Case; and Casualties occasioning Loss of Life from other Casualties.

—	Casualties occasioning Loss of Life.					Casualties not occasioning Loss of Life.			Total.				
	No. of Casualties.	Tonnage of Vessels.	Lives Lost.	Lives Saved.	Hands employed.	No. of Casualties.	Tonnage of Vessels.	Hands employed.	No. of Casualties.	Tonnage of Vessels.	Lives Lost.	Lives Saved.	Hands employed.
Loaded Vessels	3	397	19	7	26	15	1,446	88	18	1,843	19	95	114
Vessels in Ballast	—	—	—	—	—	4	434	22	4	434	—	22	22
Total of Loaded Vessels and Vessels in Ballast	3	397	19	7	26	19	1,880	110	22	2,277	19	117	136

TABLE 6.—PER-CENTAGES.

Description of Vessels.	Proportion per Cent. that—				
	Casualties to Vessels with **Cargo** and Vessels in **Ballast** respectively, bear to the whole Number of Casualties.	Casualties occasioning **Total Losses** bear to the whole Number of Casualties.	Casualties occasioning **Partial Losses** bear to the whole Number of Casualties.	Casualties occasioning **Loss of Life** bear to the whole Number of Casualties.	**Lives Lost** bear to the whole Number of Hands employed.
Loaded Vessels -	81·8	84·6	77·8	16·7	16·7
Vessels in Ballast -	18·2	15·4	22·2	—	—
Loaded Vessels and Vessels in Ballast	—	59·1	40·9	13·6	14·

TABLE 7.—Wrecks and Casualties, showing the Cargoes of the Ships.

Coals - - - - - -	6
Grain - - - - - -	2
General - - - - - -	3
Iron - - - - - -	3
Salt - - - - - -	4
Vessels in Ballast - - -	4
Total - - - -	22

TABLE 8.—Wrecks and Casualties, showing the Vessels referred to in the Return annexed arranged according to the Rig, Tonnage, and Number of Hands on Board.

Rig.		Tonnage.		Hands.	
Barques - - -	1	60 and under - -	7	With 5 and under - -	15
Brigs - - -	2	100 and under - -	8	„ 10 and under - -	5
Brigantines - - -	1	200 and under - -	5	„ 15 and under - -	1
Schooners - - -	13	300 and under - -	1	„ 25 and under - -	1
Steam Vessels - -	2	500 and under - -	1		
Smacks - - -	3				
Total -	22	Total -	22	Total -	22

TABLE 9.—Wrecks and Casualties, showing the Direction of the Wind at the Time each Casualty happened, and the Number of Casualties which happened in each Month, and at each Degree of Force.

Direction of Wind.

Direction of Wind.	Jan.		Feb.		March.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		Totals.		Grand Total, 1856-57.	Direction of Wind.
	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.		
N. - -	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	1	N.
N.E. -	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	1	N.E.
E.N.E. -	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	E.N.E.
E. - -	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	2	E.
S.E. -	.	.	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	4	4	S.E.
S.S.E. -	1	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	1	3	S.S.E.
S. - -	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	S.
S.S.W. -	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	S.S.W.
S.W. -	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1	.	.	1	1	2	3	5	S.W.
W.S.W. -	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	1	W.S.W.
W. - -	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	W.
N.N.W. -	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	1	N.N.W.
Total -	1	2	2	.	.	8	.	.	.	.	.	.	1	.	.	.	.	2	.	1	.	.	4	1	8	14	22	Total.

Force of Wind.

Force of Wind.	Jan.		Feb.		March.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		Totals.		Grand Total, 1856-57.	Force of Wind.
	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.		
0 - -	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0
1 - -	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	1
2 - -	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
3 - -	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3
4 - -	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4
5 - -	.	.	.	.	.	3	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	4	5
6 - -	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1	.	1	2	3	6
7 - -	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	2	2	7
8 - -	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1	.	1	1	2	8
9 - -	1	.	1	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	3	1	4	9
10 - -	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	2	2	10
11 - -	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	2	2	4	11
12 - -	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	12
Total -	1	2	2	.	.	7	.	.	.	1	.	.	1	.	.	.	.	2	.	1	.	.	4	1	8	14	22	Total.

Table 9.—*continued.*

Figures to denote the Force of the Wind.

0.	Calm.		
1.	Light Airs	Just sufficient to give steerage way.	
2.	Light Breezes	With which a Ship with all Sail set and clean full would go in smooth water.	to 2 knots.
3.	Gentle Breeze		to 4 „
4.	Moderate Breeze		5 to 6 „
5.	Fresh Breeze	In which she could just carry in chase, full and by	Royals, &c.
6.	Strong Breeze		Single Reefs and T.G. Sails.
7.	Moderate Gale		Double Reefs and Jib.
8.	Fresh Gale		Triple Reefs, &c.
9.	Strong Gale		Close Reefs and Courses.
10.	Whole Gale	In which she could just bear close-reefed Main Topsail and reefed Foresail.	
11.	Storm	Under Storm Staysail.	
12.	Hurricane	Under Bare Poles.	

THO^{s} GRAY.

RETURN of VESSELS in DISTRESS (otherwise than by Collision) in the BRISTOL CHANNEL

Date of Casualty.	Name of Vessel. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind.		Weather.	Hour and Time of Tide.
							Direction.	Force.		
1	2	3	4	5	6	7	8	9	10	11
1856. (1) Jan. 3	Uranie, of Granville	Brig	122	8	Granville to Llanelly	Ballast	S.E.	4	Thick and dark.	8 P.M. 6 hours ebb.
(2) „ 3	Vesta, of Griefswould	Brig	267	10	Cardiff to Marseilles	Coals	S.	8	Thick	8 P.M.
(3) „ 10	Union, of St. Ives	Brigantine	84	5	Pembray to St. Ives	Coals	E.N.E.	8	Squally	¼ ebb
(4) „ 10	Louisa, of Bangor	Schooner	104	7	Par to Liverpool	Clay	E.	7	Clear	10 P.M.
(5) „ 12	Lionesse, of Scilly	Schooner	71	5	Mazagan to Cork	Grain	E. by S.	8	Cloudy	7.30 A.M.
(6) „ 14	Blanch, of Aberdovey	Schooner	80	4	Whitehaven to Newport	Iron ore	E.N.E.	6	Frosty	2 A.M. Low water.
(7) „ 18	Guillaume, of St. Servan	Brig	191	8	Havana to Havre	Sugar	W.	12	Rain	-
(8) „ 24	Amelia, of Newcastle	Schooner	249	10	Milford to Antwerp	Grain	S.W.	9	Hazy	4.46 A.M. ½ flood
(9) Feb. 2	Sarah Fleming, of Dartmouth	Brig	368	13	Cardiff to Malta	Coals	S.S.E.	8	Thick	–
(10) „ 6	Wolfe, of Cardiff	Ship	1,263	39	Cardiff to Mile Grace	Coals	S.W.	10	Stormy	5 P.M.
(11) „ 7	Bon Leon, of Nantes	Schooner	76	5	(No particulars of this wreck can be obtained.)	–	–	-	–	-
(12) „ 8	L'Union, of St. Brienne	Brig	84	7	Swansea to Marseilles	Coals	E.S.E.	6	Rain	4 A.M.
(13) „ 8	Catherine Jenkins, of Swansea.	Barque	399	11	Cuba to Swansea	Copper	S.S.E.	1	Thick	3.30 A.M.
(14) „ 8	Great Duke, of Boston	Ship	1500	32	New Orleans to Liverpool	Cotton	S.S.W.	9	Thick	5 A.M. High water.
(15) „ 9	Superb, of Barnstaple	Smack	-	-	Barnstaple to	Ballast	Calm	0	Hazy	8.30 P.M.
(16) „ 9	Lady Campbell, of Waterford.	Barque	333	14	Cardiff to Waterford	Coals	W.S.W.	3	Clear	1.30 A.M.
(17) „ 9	Sabrina, of Cork	S.S.	314	21	Bristol to Cork	General, and Passengers.	S.W.	9	Coarse	9.24 A.M.
18) „ 15	Mette Magrath, of Norway	Barque	148	13	Cardiff to Malta	Coals	W.S.W.	7	Thick	-
(19) „ 19	Flag of Truce, of Newcastle	Barque	-	-	London to Madras	General	-	-	-	-
(20) „ 20	Albatross, of Norway	Brig	317	11	Cardiff to Malta	Coal	E.	5	Clear	0.30 P.M. Low water.
(21) „ 26	Sovereign, of Gloucester	Smack	25	2	Port Leven	Ballast	W.	6	Hazy	5.30 A.M.
(22) „ 29	Raven, of Sunderland	Brig	283	11	Cardiff to Constantinople	Coals	S.W.	10	Clear	8.30 A.M. Low water.
(23) Mar. 8	Jane Frances, of Waterford	Schooner	48	4	Waterford to Newport	Oats	Calm	0	Hazy	7.45 P.M.
(24) „ 9	Jane of Aberystwith	Schooner	82	6	Barrow to Newport	Iron Ore	E.	1	Thick	7 A.M. High water.

David's Head to the Land's End, including the Scilly Islands, during the Years 1856 and 1857.

l's Age, and classed yd's List. 13	Vessel. Estimated Loss on. 14	Vessel. Insured for, and where. 15	Cargo. Estimated Loss on. 16	Cargo. Insured for, and where. 17	Lives lost. 18	Number of Lives saved, and by what Means. 19	Nature of Casualty, and whether occasioning Total Loss or only partial Damage. 20	Site and Cause of Casualty. Remarks. 21	Authority. 22
s classed.	£600	Unknown	-	-	None	9, by boat	Wrecked Total.	on Hooper Sands, entrance of Llanelly Harbour. Could not get a pilot, and anchored in an improper place.	Wr. 66 Dep. 83
classed.	Unknown	Unknown	Unknown	Unknown	None	-	Leaky Partial.	in heavy gale at sea, W.S.W. of Scilly; put into Milford to discharge	Wr. 147 Dep. 191
s	Unknown	£500 London.	None	Not	None	Stayed by vessel	Stranded- Partial.	on the Bar in St. Ives Bay; much strained and damaged. Run on bar when tide was more than ½ ebb; got off. Pilot said to be in error.	Dep. 160 Wr. 232
wn	£400	Bangor	Unknown	Unknown	None	All	Dismasted Partial.	in heavy gale off Trevose Head, and all rigging, bowsprit, and gear carried. Much damaged.	Wr. 175 „ 308
rs d's A 1.	£100	Lloyd's, £500 Topsham, £300.	Unknown	Unknown	None	All	Leaky Partial.	and much damaged by stress of weather, in lat. 45° 24′ long. 11° 47′; put into Scilly to repair dnd refit.	Wr. 276
s	Unknown	Unknown	Unknown	Unknown	2	2, by own boat	Wrecked Total.	on Skerwether Shoal, 5 miles to westward of Porthcawl. Master made an error in reckoning.	Wr. 141
u	Unknown	France	Unknown	France	2	-	Dismasted Partial.	and severely damaged in lat. 42° N. long. 36° 28′ W.; put into St. Ives to discharge and repair.	Wr. 438 Dep. 845
s	Unknown	Unknown	Unknown	Unknown	9	1, by pilots at Llanelly	Wrecked Total.	on No. 3. buoy, Burry River, by stress of weather. Total loss.	Wr. 240 „ 254
s	Unknown	£1,500 Topsham.	-	-	None	-	Leaky Partial.	sprung a leak in lat. 49° 45′ N., long. 9° W.; bore up to Milford, the pumps constantly going. Cargo discharged at Milford.	Dep. 487
classed.	-	Yes	Unknown	Unknown	None	All	Leaky Partial.	sprung a leak in lat. 47° 16′ N. long. 12° 16′ W. in consequence of the heavy gale. Put back to Cardiff to discharge and repair.	Wr. 473 „ 475 Dep. 504
-	-	-	-	-	5 crew and 2 from shore.	-	Wrecked Total.	off Porthcawl; all hands lost, and 2 men drowned in their attempt to reach the wreck.	Wr. 490
n	£380	£400 France	None	France	None	-	Wrecked Total.	on St. Ives pier, heavy ground sea parted stern chains, and threw her on beach, and being very old was soon broken up.	Wr. 914
s Class.	£5,000	Unknown	Unknown	Lloyd's	7	4, washed on the rocks	Wrecked Total.	1 mile W. of Oxwich Point, Bristol Channel. Set of tide, heavy swell and want of caution. The lead does not appear to have been hove. Crew got into a small boat, which capsized. Seven were drowned.	Dep. 371 Wr. 444
-	£22,000	Unknown	£36,000	Unknown	29	3	Wrecked Total.	to westward of Ballslaughter Bay, near Milford, captain desiring to make quick passage, filled and ran before the wind. Strong gale. Ship got among breakers, and was dashed to pieces.	Wr. 372 Dep. 662
rs classed.	£50	Not	-	-	None	-	Stranded Partial.	on N.W. part of Flat Holm, through vessel becoming unmanageable. Strong current drifted her off. She was derelict about 8 hours, and subsequently recovered by master and crew.	Wr. 415 Dep. 618
s	£300	Not	None	Not	None	All	Stranded Partial.	in Penarth roads, after being in collison at different times with three vessels. Sustained very much damage. The last collision and stranding attributed to the incompetency of a pilot.	Dep. 445 Wr. 447
rs A 1.	£150	Not	Nil	Unknown	None	-	Stranded Unknown.	on Nelson's Point east side River Avon, caused by want of beacons to show the course of the river when the land at mouth is overflowed.	Wr. 786
ld	-	£2,000 Norway	-	-	None	-	Leaky Partial.	sprung a leak off the Nash Light, Bristol Channel, by stress of weather, crew refused to proceed; put back to Bristol to discharge and repair.	Wr 630
-	-	-	-	-	1	-	Leaky Partial.	and in great distress from severity of weather at sea.	Dep. 724 Wr. 920
-	-	Norway	Unknown	Unknown	None	-	Stranded Partial.	eastward of the Mort Stone in Rockham Bay, Bristol Channel; got off leaky, and towed into Bristol to discharge and repair; said to be negligence of pilot.	Wr. 688
wn	Unknown	Not	-	-	None	-	Stranded Partial.	near the entrance of Appledore Harbour, caused by not steering a proper course.	Wr. 716
-	Unknown	Unknown	Unknown	Unknown	None	-	Leaky Partial.	sprung a leak in lat. 47.10. long. 8.10. West, in consequence of tremendous gales and cross seas; obliged to bear up for Milford to discharge and repair.	Wr. 723
rs	£200	Not	£1,200	Unknown	None	All in ship's boat	Foundered Total.	near E. Cardiff sands, having sprung a leak by grounding on her anchor in swinging; calm weather and strong spring tide.	Wr. & Dep. 126 „ 827 „ 830 „ 1096
-	Unknown	London and Wales.	Nil	Unknown	None	-	Stranded Partial.	at entrance of Aberthaw Harbour, owing to the foggy weather; will have to discharge cargo to get her off at highest tides.	Wr. 866.

Return of Vessels in Distress (otherwise than by Collision) in the BRISTOL CHANNEL, from St.

Date of Casualty. 1	Name of Vessel. — Port of Registry (if known). 2	Rig. 3	Tons. 4	Men. 5	From. — Bound to. 6	Cargo. 7	Wind. Direction. 8	Wind. Force. 9	Weather. 10	Hour and Time of Tide. 11
1856. (25) Mar. 12	Desdemona, of New Orleans	Ship	656	20	Havre to Cardiff	Ballast	E.S.E.	9	Hazy	4 30 A.M.
(26) ,, 18	True Blue, of Teignmouth	Schooner	73	5	Newport to Brest	Iron	E.S.E.	3	Very thick	8 A.M.
(27) ,, 23	L'Ernest of La Hogue	Brigantine	85	6	Llanelly to Regenville	Coals	S.E.	6	Hazy	5 30 P.M.
(28) ,, 26	Medora, of Liverpool	Schooner	37	3	Liverpool to Hayle	General	S.E.	8	Clear	4 P.M.
(29) ,, 28	Hermes, of S. Shields	Brig	268	9	Cardiff to London	Coal	E.S.E.	5	Hazy	8 P.M.
(30) ,, 29	Seostris, of Skein	Ship	600	18	Cardiff to Barcelona	Coals	E.	6	Breeze	-
(31) ,, 30	William, of Bideford	Schooner	64	4	Newport to Plymouth	Coals	S.E.	5	Fine	4 30 P.M. Low water.
(32) April 5	Casket, of Alloa	Brig	196	8	Jamaica to London	General	Variable	8	Stormy	-
(33) ,, 10	Jane, of Camaes	Sloop	26	3	Barrow to Neath	Iron	W.S.W.	6	Thick fog	9 30 A.M.
(34) ,, 20	Sovinto, of Lillisand	Ship	415	15	Greenock to Stettin	Iron	E.	10	Stormy	-
(35) ,, 21	Choice, of Bideford	Schooner	137	7	Newport to Portsmouth	Coals	Variable	1	Clear	3 A.M.
(36) ,, 26	Brigantine, of Padstow	-	-	-	-	Coals	-	9	-	-
(37) ,, 27	Adele, of St. Malo	Schooner	112	7	Cardiff to Marseilles	Coals	E.	3	Cloudy	8 30 A.M.
(38) May 7	Brothers, of Lydney	Trow	60	3	Newport to Bristol	Coals	E.N.E.	10	Clear	7 30
(39) ,, 11	George Brown, of Kinsale	Schooner	88	5	Kinsale to Cardiff	Sheep	W.	4	Thick	8 P.M.
(40) ,, 14	Madam, of Belfast	Schooner	95	5	Swansea to Belfast	Coals	N.W.	11	Stormy	1 P.M.
(41) ,, 17	Brisk, of Brixham	Schooner	91	6	Llanelly to Havre	Coals	W.N.W.	6	Squally	-
(42) ,, 18	Margaret, of Kilrush	Smack	-	-	-	-	W.N.W.	8	Hazy	5 40 High water.
(43) ,, 31	Kingston, of Sunderland	Barque	279	10	Sunderland to Constantinople	Coals	S.E. by S.	6	Hazy	6 30
(44) June 6	Mary, of Barnstaple	Smack	35	3	Newport to Mouthmill	Coals	N.E.	5	Clear	High water
(45) ,, 12	Leonora Devas, of Llanelly	Schooner	96	6	Liverpool to Llanelly	Copper	W.	7	Hazy	8 30 A.M.
(46) ,, 14	Brothers, of Brixham	Schooner	113	4	Llanelly to Portsmouth	Coals	W.N.W.	7	Squally	4 P.M.
(47) ,, 15	Emily, of Bridgewater	Smack	67	4	Bridgewater to Devonport	Timber	N.N.W.	6	Squally	-

. to the Land's End, including the Scilly Islands, during the Years 1856 and 1857—*continued.*

l's Age, ind classed 'd's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. —— Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
13	14	15	16	17	18	19*	20	21	22
r	Unknown	United States	Nil	Nil	None	-	Stranded Partial.	on the outer stones in St. Ives Bay; got off. Severe gale sprung up; got a leak of 2 feet per hour. Put into St. Ives to repair damages. Might have been avoided if light on Godrevey.	Dep. & Wr. 873 „ 870
ed *	£100	Unknown	None	Unknown	None	All in own boat	Stranded Partial.	on Lavarnock Reefs, Swansea. Very thick weather and strong current; became leaky and seriously damaged.	Wr. 929 Dep. 971
	Unknown	France	Unknown	Unknown	None	-	Stranded Partial.	on the stones in St. Ives Bay, for want of marks to point out position of rocks, which are covered at high water, wind being S.E. over the land and water smooth. Much damaged.	Wr. 935 „ 939
	Unknown	Unknown	None	None	None	-	Stranded Partial.	on S.W. point, Ramsey Island. Ship missed stays, unshipped rudder, and got much damaged; put into Milford to discharge.	Wr. 987
s	Unknown	Unknown	Unknown	Unknown	6	3, by a schooner	Wrecked Total.	on Kettles Bottom near Lands End, mistaking the position of the rock; crew got into boat; ship heeled over and entangled it in rigging, and 6 of them were drowned.	Dep. & Wr. 956 Wr. 973
s	Unknown	Norway	Unknown	Unknown	None	-	Leaky Partial.	Trevose Light, bearing S.S.E. 10 miles, by stress of weather. Put into Queenstown to discharge and repair.	Wr. 983
s E 1.	£550	Lloyds	£47	Unknown	None	4, by own boat	Stranded Total.	on Peel Point, Lands End. Hugging the shore; the wind failed, and tide drove her on rocks, and afterwards sunk in deep water. Total loss.	Wr. 973 „ 981
s	Unknown	Unknown	Unknown	Unknown	None	-	Dismasted Partial.	and otherwise damaged off Scilly by a succession of gales. Sails all split or blown away, and ship very seriously damaged. Put into Scilly to discharge and repair.	Wr. 1261 „ 1262
	Total	Unknown	Total	Unknown	None	-	Wrecked Total.	on the Hedges Rock. Through the extreme thickness of the weather the land could not be seen; and having struck on sunken rock was run ashore. She went to pieces; total loss.	Wr. 1143
wn	Unknown	Unknown	Unknown	Unknown	None	-	Leaky Partial.	Off Scilly by stress of weather, aggravated by the nature of the cargo. Being a fir-built vessel, was too weak to carry a cargo of iron and bricks without straining. Cargo discharged.	Wr. 1262
	£ 1,810	Topsham	£ 150	Unknown	None	7, in the ship's boat	Foundered Total.	N.W. of Lundy Island, 5 miles, having sprung a leak.	Wr. 1213 „ 1225
	-	-	-	-	-	-	Abandoned Tota	and found derelict 7 or 8 miles from the Foreland, Swansea, by the "Swan," of Bideford, and delivered to receiver.	Dep. 1237
rs ss.	None	Unknown	None	Unknown	4, much burned, not killed.	-	Explosion Unknown.	in Bute dock, Cardiff, from coal gas. Hatchways open; no fire below; cause unaccountable. Four men seriously injured.	Wr. 1301
wn	Unknown	Unknown	Unknown	Unknown	1	2, by the "Jenny Jones" S. S.	Foundered Total.	in the Bristol Channel, between Portishead and Fort Point. Sprung a leak in the bad weather.	Wr. 1327
rs	-	Unknown	Unknown	Unknown	None	-	Stranded Unknown.	on Braunton Sands, Devon. The weather foggy; and only one cast of the lead taken. Ship in a bad position.	Wr. 1305
	Unknown	Unknown	Unknown	Unknown	1	-	Distressed Partial.	labouring in heavy sea; lost cables and anchors; shipped a heavy sea on Llanelly Bar, which carried away stanchions, gally, bulwarks, &c., and washed a man overboard. Got into Llanelly harbour to repair.	Dep. 1372
	£ 45	Brixham	Unknown	Unknown	None	-	Dismasted Partial.	in Bristol Channel. On starboard tack, beating down under single-reefed topsails, when the foremast head went, carrying with it the fore and main topmast and jibboom.	Wr. 1366
	-	-	-	-	-	-	Wrecked Total.	off Penarth; supposed to have parted from her anchor in Caldy Roads; and running for Burry Port, seen to strike, and immediately go down. Piece of stern, with name and port, washed ashore.	Wr. 1359
s	£2,800	£2,800 Topsham, London, Whitby.	£200	Unknown	None	10, by Mount's Bay Pilot Boat.	Foundered Total.	24 miles S.W. of Lands End. Sprung a leak which increased against all efforts to overcome, and water overflowed forecastle and cabin decks, left her, when she went down in deep water.	Wr. 1420 „ 1454
s	£120	Nil	None	Nil	None	2, by boats	Wrecked Total.	W. of Mouth Mill near Clovelly. Anchor breaking while warping off, with wind on shore. Total loss.	Wr, 1425
A 1.	£500	Not	None	Unknown	None	-	Dismasted Partial.	2 miles from Skomar Island (Milford.) Carried away both masts by the rolling and pitching of a high and cross sea, and a strong wind; towed into Milford for repairs.	Wr. 1449
rs	£30	Brixham	Nil	Nil	None	-	Stranded Unknown.	off the Lands End in squally weather, carrying a press of sail to round the Land's End.	Wr. 1418
rs E.A.	£100	Topsham	Unknown	Unknown	None	-	Derelict Total.	found abandoned and water-logged 10 miles S.W. of Trevose Head. Struck by heavy sea while wearing, which started a butt and caused her to fill fast; crew abandoned her. Towed into Appledore by Brig Charlotte, which was awarded £120 for the service.	Dep. 1444 Wr. 1445.

Return of Vessels in Distress (otherwise than by Collision) in the Bristol Channel, from St.

Date of Casualty.	Name of Vessels. — Port of Registry (if known.	Rig.	Tons.	Men.	From — Bound to.	Cargo.	Wind.		Weather.	Hour and Time of Tide.
							Direction.	Force.		
1	2	3	4	5	6	7	8	9	10	11
1856. (48) June 16	Albert Edward, of Jersey	Smack	21	3	Vivier to Jersey	Cyder	S.S.W.	6	Moderate	- -
(49) July 8	Fordmill, of Sunderland	Brig	223	8	Valencia to Cardiff	Ballast	N.N.W.	11	Rough	8 30 A.M.
(50) „ 10	Success, of Liverpool	Brigantine	67	2	Tralee to Cardiff	Ballast	W.N.W.	9	Squally; Fine.	10 50 A.M.
(51) „ 15	Pryde, of Liverpool	Schooner	85	5	Londonderry to Gloucester	Grain	W.	3	Foggy	10 30 P.M.
(52) „ 23	Star of the West, of Plymouth	Brigantine	176	7	Swansea to Messina	Iron	S.E. & S.W.	6	Rainy	8 A.M. High water.
(53) „ 25	Floke, of Stavangar	Schooner	173	8	Cork to Messina	Steam coal	W.	4	B. C.	10 A.M.
(54) „ 26	Demetrius, of Exeter	Brigantine	129	7	Newport to Dieppe	Iron	N.N.W.	5	Fine	9 A.M.
(55) „ 31	Superior, of Falmouth	Schooner	88	5	Falmouth to Swansea	Ballast	N.N.E.	2	Foggy	6.30 A.M.
(56) Aug. 18	Friends, of Cardiff	Smack	55	4	Bristol to Cardiff	General	N.N.E.	10	Stormy	9 A.M.
(57) „ 21	Elizabeth, of Bideford	Brig	59	5	Port Talbot to Plymouth	Coals	N.N.W.	10	Hazy	4 P.M.
(58) „ 28	Custos of Liverpool	Bark	273	17	Liverpool to River Bonny	General	W.S.W.	4	Moderate and hazy.	1 A.M. High water.
(59) Sept. 12	Bessie, of Padstow	Smack	43	4	Newport to Padstow	Coals	N. by E.	7	Squally	2 P.M.
(60) „ 25	Isabella, of Troon	Schooner	65	4	Cardiff to Waterford	Coal	W.S.W.	7	Clear	7 P.M.
(61) „ 25	Henry Holman, of Plymouth	Schooner	158	8	Smyrna to Liverpool	Valonia	E.N.E.	9	Hazy	1 30 P.M.
(62) „ 27	Monkey, of Drogheda	Schooner	81	6	Newport to Liverpool	Coals	S.E.	10	Rain	12 30 A.M. Low water.
(63) „ 27	Wave, of Liverpool	Brigantine	119	6	Swansea to Portsmouth	Coals	S.E.	10	Rain	2 A.M.
(64) „ 27	Thomas, of Bideford	Brig	75	4	Newport to Portreath	Coals	S.E.	10	Thick	2 A.M.
(65) „ 27	Happy Return, of Falmouth	Sloop	48	4	Newport to Falmouth	Coals	S.E.	10	Rain	2 A.M.
(66) „ 27	Ammet, of Aberystwith	Schooner	41	4	Newport to Aberystwith	Coals	S.E.	10	Rain	2 A.M.
(67) „ 27	Amity, of Bristol	Sloop	51	4	Newport to Milford	Coals	S.E.	10	Rain	2.30 A.M.
(68) „ 27	Pioneer, of Exeter	Brig	90	6	Newport to Chatham	Iron	S.E. to S.S.E.	10	Rain	2 A.M.
(69) „ 27	Henrietta, of Barnstaple	Schooner	37	3	Swansea to Barnstaple	Culm	S.E.	10	Rain	2 A.M.

l to the Land's End, including the Scilly Islands, during the Years 1856 and 1857—*continued.*

l's Age, ınd classed ɾd's List. 13	Vessel. Estimated Loss on. 14	Vessel. Insured for, and where. 15	Cargo. Estimated Loss on. 16	Cargo. Insured for, and where. 17	Lives lost. 18	Number of Lives saved, and by what Means. 19	Nature of Casualty, and whether occasioning Total Loss or only partial Damage. 20	Site and Cause of Casualty. — Remarks. 21	Authority. 22
-	£40	No	Unknown	Not	None	- - - -	Stranded Partial.	on the E. side of Lundy Island. Missed stays and went ashore near the landing place; planking on bottom much chafed.	Wr. 1450
-	£300	£1,600 Sunderland.	Nil	Nil	None	- - - -	Stranded Partial.	at entrance to Padstow Harbour. Caught by the eddy winds in running for the harbour, and driven on rocks, loosing rudder and getting on the bar owing to the warp breaking.	Wr. 1538
-	£300	Not	Nil	Nil	None	- - - -	Stranded Total.	at back of the Island of Beam Dock, Weston-super-Mare. Sails reported to be very bad, and the weather very boisterous; spars and rigging saved. Vessel holed, and supposed to have become a wreck.	Wr. 1539
-	£100	Liverpool	Unknown	Liverpool	None	- - - -	Stranded Unknown.	on the Hooper Sands in Carmarthen Bay. Thick weather, and heavy swell setting on the bar from the W.	Dep. 1601 Wr. 1638
Red *	Unknown	£1,600 Topsham.	Nil.	Unknown	None	- - - -	Leaky Partial.	through striking the bottom of Porthcawle Harbour in the heavy wash of the sea. Put into harbour to discharge and repair.	Wr. 1710
he	Unknown	Unknown	Nil.	Unknown	None 3 injured.	- - - -	Explosion Partial.	in Swansea Harbour. Ship loaded with steam coal; the main hatchway was battened down. Coal wet when loaded, and not sufficient vent for escape of gas.	Wr. 1655
years.	£150	£800 Topsham and Exmouth.	£50	Unknown	None	- - - -	Stranded Partial.	on the bar at entrance of Padstow. Sprung a leak at sea, and in getting into Padstow struck on the bar. Want of a pilot. Towed into Padstow to discharge and repair.	Wr. 1738
1.	£150	£700 Topsham.	-	-	None	- - - -	Stranded Unknown.	East part, Island St. Mary's, Scilly, in consequence of dense fog then prevailing; had made St. Agnes Light before fog came on, and did not heave the lead afterwards.	Wr. 1750 „ 1767
ot.	£160	Not	£2,000	Not	None	- - - -	Wrecked Total.	off Redbrink Cliff, E. end of Barry Island. Stress of weather. Total loss.	Wr. 1760
-	£350	-	£60	-	Nil.	5, by a schooner	Abandoned Total.	25 miles S.S.W. of the Land's End, having sprung a leak. Crew landed at Falmouth.	Wr. 1762
-	Unknown	Unknown	Unknown	Unknown	None	- - - -	Wrecked Total.	on the Crim Rocks W. of Scilly Rocks; thick weather; master thought he was more to the westward; could not take observation and did not heave the lead.	Wr. 1794 „ 1796 „ 1824
1.	£ 900.	£ 125 Padstow.	£ 40	Not	None	- - - -	Capsized Total.	3 miles from Hartland Point; carrying too much sail; and ship being crank, she filled and capsized, and was then abandoned.	Wr. 1943 „ 1917
-	Unknown	£ 300 Liverpool.	None	Unknown	None	- - - -	Distressed Partial.	2 miles from Lennyhead; much shook and strained from being struck by a heavy sea, and making water fast. Put into Milford to discharge abd repair.	Wr. 1911 „ 1878
1.	Unknown	£1,800	None	Unknown	None	- - - -	Dismasted Partial.	off Arklow, having lost rudder and being much damaged in a gale; cut away her mainmast to prevent her getting on shore. Towed into Milford to discharge and repair.	Wr. 1768.
-	Unknown	Unknown	Unknown	Unknown	None	6, by coast-guard boat	Foundered Total.	in Mumbles Roads. Riding out a gale the schooner "Swiftsure" drove from her anchors, and came foul of them; began to make water, and shortly after sank.	Wr. 1982 „ 2015
se.	Unknown	Unknown	Unknown	Unknown	None	- - - -	Stranded Partial.	in Mumbles Roads. Ship striking heavy, and making much water; gale increasing, parted chains, and cargo thrown overboard.	Wr. 1984 „ 2017
-	Unknown	Unknown Lloyd's.	Unknown	Unknown	None	- - - -	Stranded Partial.	in Mumbles Roads. Wind shifted, which caused her to part from her anchors, and run ashore.	Wr. 2013
-	Unknown	Not	Unknown	Unknown	None	- - - -	Stranded Partial.	in Mumbles Roads; wind shifted; blew a gale. Ship drove from anchors, and run ashore.	Wr. 2013
-	£200	£200 Lloyd's.	Unknown	Unknown	None	- - - -	Foundered Total.	in Mumbles Roads; wind shifted; heavy sea drove the vessel from anchor against other ships. She sustained severe damage and went down.	Wr. 2011
-	Unknown	Unknown	Unknown	Unknown	None	- - - -	Foundered Total.	in Mumbles Roads; precisely same as the preceding entry.	Wr. 2011
-	Unknown	Lloyd's	Not	Not	None	6, by a shore pilot	Stranded Partial.	off the Mumbles Roads; heavy gale; forced to run; ship struck at low water, unshipped rudder; started stern post, which caused her to fill and sink; recovered and taken to Swansea, after discharging cargo.	Wr. 2020 „ 2001
-	Unknown	Unknown	Unknown	Unknown	None	- - - -	Stranded Unknown.	in Mumbles Roads; wind shifted very suddenly, and blew a heavy gale, with heavy sea, which caused her to drive on shore.	Wr. 2017

Return of Vessels in Distress (otherwise than by Collision) in the BRISTOL CHANNEL, from St.

Date of Casualty.	Name of Vessels. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind. Direction.	Wind. Force.	Weather.	Hour and Time of Tide.
1	2	3	4	5	6	7	8	9	10	11
1856. (70) Sept. 27	Western Star, of New Ross	Schooner	47	6	Port Talbot to Featherd	Coals	S.E.	10	Rain	2 A.M.
(71) „ 27	Favourite, of Cardigan	Sloop	51	4	Cardigan to Havre	Copper	S.E.	9	-	-
(72) „ 27	Economy, of Cork	Schooner	133	7	Newport to Cork	Coals	W.N.W.	5	Hazy and dark.	9.30 P.M.
(73) „ 29	Cyfarthfa, of Port Madoc	Smack	33	3	Cardiff to Port Madoc	Coals	S.S.W.	10	Thick	3 A.M.
(74) Oct. 2	Fleta, of Shoreham	Brig	188	9	Pembrey to London	Coals	S.W.	7	Clear	1 P.M.
(75) „ 3	Jules, of Granville	Ketch	65	5	Eberient to Llanelly	Ballast	S.W.	9	Thick	3 A.M.
(76) „ 20	Lunaria, of Aberystwith	Barque	206	10	Swansea to Alexandria	Coals	W.N.W.	10	Hazy	4 P.M.
(77) „ 20	Jeane, of Whitehaven	Brig	170	9	Whitehaven to Cardiff	Iron	N.W.	9	Hazy	3 P.M.
(78) „ 21	Victoria, of Hartlepool	Barque	225	8	Swansea to Havre	Coals	S.S.E.	5	Clear	9 P.M.
(79) „ 22	Star, of Bude	Sloop	34	3	Swansea to Bude	Culm	S.S.E.	5	Dark	7 P.M.
(80) „ 27	Fred. Ridzlaff of Stettin	Barque	467	14	Cardiff to Hamburg	Coals	N.E.	4	Cloudy	5 30 A.M.
(81) „ 30	Sir W. Curtis, of Yarmouth	Schooner	44	4	Yarmouth to St. Ives	Wheat	S.	8	Thick	6 P.M.
(82) Nov. 3	Letitia, of Dublin	Sloop	29	4	Dublin to Bristol	Potatoes	E.S.E.	4	Thick and hazy.	½ ebb
(83) „ 15	Speculation, of Aberystwith	Schooner	41	4	Barrow to Newport	Iron	N.W.	5	Cloudy	2.20 A.M.
(84) „ 20	Star of Hope, of London	Brig	218	10	Bristol to Swansea	General	W.N.W	4	Moderate; thick.	1 hour of low water.
(85) Dec. 2	Wanderer, of Padstow	Schooner	55	4	Hayle to Llanelly	Copperore	S.W.	9	Thick	3 A.M.
(86) „ 4	Danube, of Picton	Brig	160	9	Wallace, to Liverpool	Timber	E.S.E.	9	Thick	12.30 A.M.
(87) „ 6	Clemence, of Libourne	Schooner	78	6	Belle Isle to Newport	Ballast	S.S.W.	9	Thick, with Rain.	3 P.M.
(88) „ 7	NeuvoTorcuarto, of Valentia	Schooner	176	9	Swansea to Valencia	Coal	S.S.W.	10	Bad and thick.	8 15
(89) „ 7	Richardson, of Swansea	Barque	367	16	Coquimbo to Swansea	Copper	S.W.	10	O. R.	2 30 A.M.
(90) „ 7	Ford Mills, of Sunderland	Brig	223	8	Cardiff to Malaga	Coke	S.W.	10	O. R.	2 P.M.
(91) „ 7	Don, of Southampton	Schooner	160	7	Newport to Southampton	Coal	S.S.W.	10	Thick	1 A.M.
(92) „ 9	Louis Munro, of Liverpool	Barque	300	13	Malta to Cardiff	Ballast	S.S.W.	10	Thick	6 30 P.M.
(93) „ 27	John Wray, Great Yarmouth	Polcre	99	5	Liverpool to Santander	Wheat	S.W.	9	Gale, cloudy.	Midnight
(91) „ 29	Charles M'Lachlan, Yarmouth, N.S.	Brig	236	9	Cardiff to Martinique	Coals	S.W.	5	Cloudy	5 P.M.

d to the Land's End, including the Scilly Islands, during the Years 1856 and 1857—*continued.*

el's Age, and classed yd's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. — Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
13	14	15	16	17	18	19	20	21	22
rs -	Unknown	Unknown -	Unknown	Unknown	None -	6, by coastguard boat -	Leaky - Unknown.	Drove from anchor in Mumbles Roads, "Swiftsure" and other vessels; came in contact with this and other ships by stress of weather, having parted from anchor in gale of wind.	Wr. 2015
own - -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Stranded Partial.	near Swansea; slipped from both anchors and ran ashore to save ship and cargo. Got off, and taken into Swansea for repairs and discharge.	Dep. 2004
rs t. -	£450 -	Not - -	£100 -	Not -	None -	- - - -	Wrecked Total.	on Breaksea point; dark night; hazy weather; lead not hove; bilged and sunk (Swansea).	Wr. 2012
rs -	Total -	Port Madoc Club.	Total -	Not -	None -	- - - -	Foundered Total.	off St. Ann's Light. Abereithy. Struck with a heavy sea in a gale, which caused her to springing a leak, fill, and sink.	Wr. 1930
s - -	Unknown	£1,000 - - London and Topsham.	None -	Unknown	None -	- - - -	Dismasted Partial.	30 miles W. of Lundy Island. Bowsprit carried away, and foremast head sprung, struck by heavy squall.	Wr. 1986
nths -	£850 -	Unknown -	Unknown	Unknown	1	- - - -	Wrecked Total,	between the islands of Caldy and St. Margarets.	Wr. 2091
nths l. -	Unknown	£3,000 - - London.	None -	Unknown	None -	- - - -	Dismasted Partial.	in Lat. 44° 38″ N., Long. 8° 27″, and leaky. Put into Milford to discharge and repair.	Wr. 2136
rs - -	Unknown	Whitehaven -	None -	Unknown	None -	- - - -	Dismasted Partial.	between the N. and S. Bishops. Heavy gales and violent squalls and dangerous lee shore. To clear the rocks cut away masts and rigging, and anchored safely in Hubberstone Roads.	Wr. 2239
wn -	Unknown	£2,000 - - Hartlepool.	None -	Unknown	None -	- - - -	Leaky - Partial.	off Lundy Island. Ship straining in a heavy head sea, and sprung a leak.	Wr. 2240
s - -	£300 -	Not - -	£22 -	Not -	None -	3, by ropes from shore	Stranded Total.	at back of Swansea Pier-head Light. Stood too close to pier head to land pilot.	Wr. 2344
ths -	£3,000 -	£5,500 - - Stettin.	£150 -	Not -	4	10, by boats from ships	Explosion Partial.	from coal gas, E. side W. Bute dock, Cardiff; very seriously damaged. Hatches incautiously closed, and large quantity of gas generated.	Wr. 2289
s - -	Unknown	Yes - -	Unknown	£1,570 - Exchange.	None -	- - - -	Stranded Total.	at Hugh Ferry. Going up to the quay took the ground, strained and filled; and on being removed at low water, fell over from port to starboard, and sustained considerable damage.	Wr. 2306
wn -	Unknown	Unknown -	£160 -	Unknown	None -	- - - -	Stranded Total.	on the Hooper Sands, Burry River. Run ashore to save life after the vessel had sprung a leak.	Wr. 2360
- 1. -	£400 -	£400 - -	Unknown	Unknown	None -	- - - -	Wrecked Total.	off Linney Head, Pembroke. Struck upon a rock, the existence of which the master was not aware; came off, and instantly filled and went down in deep water. Lead not hove.	Wr. 2373 „ 2473
hs ears. -	£3,000 -	Unknown -	Unknown	Unknown	None -	- - - -	Wrecked Total.	on Tuskar Rocks, and drifted on rock at Sutton Beach; in tow of steam tug, which got on the rock, and vessel having plenty of reach got on afterwards. Expected to go to pieces.	Wr. 2487 „ 2496
- 1. -	Unknown	£300 - - Topsham.	None -	Unknown	None -	- - - -	Dismasted Partial.	&c. off Lundy Island; bulwarks carried away and strained. Struck by a heavy sea.	Wr. 2758
- -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Stranded Partial.	on the Stack Rocks of Milford; dragged her anchors in a gale of wind and went on the rocks; got off with assistance, and run on the ground at Hubblestone Pile.	Wr. 2610
s t. -	£480 -	£200 - -	Nil	Nil	None -	- - - -	Wrecked Total.	on Pentywan Point, Carmarthen Bay. Lost sails and spars, and sprung foremast; vessel old and rotten.	Wr. 2645 „ 2641 „ 2643
wn -	£1,600 -	Unknown -	Unknown	Unknown	None -	9, by a life-boat -	Stranded Total.	a mile from Tenby on S. strand between Castle Hill and Gillon Head. Parted cables in Caldy Roads and drove ashore, and in 2 hours after went to pieces. Crew saved by life-boat at great risk.	Wr. 2624
s ears. -	£1,000 -	Topsham -	None	Not -	None -	- - - -	Stranded Partial.	1 mile W. of Swansea Pier Head, having parted from anchors in heavy gale and sea; lightened and got off, and into Swansea Dock much damaged.	Wr. 2644
s E. -	Unknown	Sunderland -	Unknown	Unknown	None -	- - - -	Stranded Total.	in Rossili Bay, 1 mile S. of Burry Holmes, Cardiff. 2 anchors down; drove into broken water in the bay; cut away masts and then beached her, which was done admirably.	Wr. 2644 „ 2775
-	£600 -	Not - -	Unknown	Not -	None -	- - - -	Stranded Total.	near Saundersfoot Pier, Milford; bore up for Milford in bad weather, and while waiting to get into harbour, was cast ashore by a heavy ground sea, which parted all and left her a wreck.	Wr. 2785 „ 2787 „ 2822
-	Total -	Unknown -	Nil -	Nil -	9	4, washed ashore -	Stranded Total.	on Marlous Sands, Milford Haven. Struck by heavy sea, ballast shifted, thrown on beam ends, and became a total loss.	Wr. 2639 „ 2654
- years. -	£170 -	£800 Selby and Goole.	Unknown	Liverpool	None -	- - - -	Dismasted Partial.	and distressed 60 miles W.N.W. of Milford by stress of weather. Put into Milford to discharge and repair.	Wr. 2831
- -	£1,000 -	Unknown -	£100 -	Unknown	None -	9, by coastguard boat -	Stranded Total.	off Barry Island. Hove-to in a gale of wind, having sprung a leak, which increased; master ran her ashore to prevent her sinking. Dragged anchors. Got on rocks, bilged, and became a wreck.	Wr. 13

Return of Vessels in Distress (otherwise than by Collision) in the BRISTOL CHANNEL, from

Date of Casualty.	Name of Vessel. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind.		Weather.	Hour and Time of Tide.
							Direction.	Force.		
1	2	3	4	5	6	7	8	9	10	11
1856. (95) Dec. 29	Tribune, London	Brig	189	9	Bristol, to Cadiz	Wheat	W.	3	Squally	2 P.M.
(96) „	Elizabeth, of Bridgewater	Schooner	47	4	Dublin to Cardiff	Potatoes	N.	9	Thick	11 A.M.
1857. (97) Jan. 1	Dunaskin, of Ayr	S.S.	122	12	Lisbon to Bristol	Oranges	W.S.W.	6	Thick	10 45 P.M.
(98) „ 2	James Yeo, of Prince Edward Island.	Ship	1,081	23	Prince Edward Island to Bristol.	Timber	Calm	Calm	6 P.M	6 P.M.
(99) „ 3	Theodor, of Trieste	Brig	220	11	Lisbon to Cardiff	Ballast	S.S.W.	10	O. R. 2	11 A.M.
(100) „ 3	Feronia, of Youghal	Schooner	109	6	Youghal to Newport	Timber	S.S.W.	10	O. R. 2	2 P.M.
(101) „ 3	Jeannette, of Copenhagen	Bark	238	13	Bristol to Lisbon	Wheat	W. by S.	12	Squally	6 25 P.M.
(102) „ 3	Pursuit, of Carmarthen	Schooner	72	4	Newport to Carmarthen	Coal	W.S.W.	11	Thick	12 15 P.M.
(103) „ 3	Koniagen der Netherlanden, of Netherlands.	Ship	707	16	Callao to London	Guano	S.W.	10	Thick	11 A.M.
(104) „ 3	Volusia, of Belfast	Schooner	70	4	Tenby to Dublin	Bark	W.S.W.	11	Thick sleet	3 45 P.M.
(105) „ 3	Tweed, of Harrington	Brig	92	5	Gloucester to Waterford	Salt	S.W.	11	Thick	10 A.M.
(106) „ 3	Union, of Pembroke	Brig	120	6	Newport to Waterford	Coal	W.S.W.	11	Thick	9 A.M.
(107) „ 8	Superior, of Cork	Schooner	82	5	Cardiff to Cork	Coal	N.E. by N.	7	Dark and cloudy.	6 P.M.
(108) „ 10	Hippolyte and Marie, of Bayonne.	Brig	93	7	Dovainenez to Swansea	Ballast	W.	9	Thick	4 A.M.
(109) „ 10	Gave, of Bayonne	Brigantine	109	7	Cameat to Llanelly	Ballast	N.W.	7	Thick	10 30 P.M.
(110) „ 11	Ann, of Jersey	Smack	90	4	Unknown	Coals	W.N.W.	11	Thick and hazy.	10 30 A.M.
(111) „ 11	Alpha, of Jersey	Schooner	70	5	Unknown	Flour	W.N.W.	11	Thick and hazy.	10 30 A.M.
(112) „ 11	Johanna, of Hayle	Schooner	133	8	Llanelly to Hayle	Coals	W.N.W.	11	Hazy	7 15 A.M.
(113) „ 12	Cynosure, of Salcombe	Schooner	-	-	Leghorn to Liverpool	General	W. to N.W.	11	Thick	7 30 A.M.
(114) „ 12	Union, of Milford	Brig	102	6	Cardiff to Waterford	Coals	S.W. to W.	11	Thick	10 30 A.M.

to the Land's End, including the Scilly Islands, during the Years 1856 and 1857—*continued.*

l's Age, and classed yd's List.	Vessel.		Cargo.		Lives lost	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. — Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
13	14	15	16	17	18	19	20	21	22
wn	Unknown	1600 Lloyd's	Unknown	Unknown	None		Stranded Partial.	on the W. spit of Cardiff Sands. Vessel lying at anchor; breeze increasing; chain parted; drifted on sand, and rubbed off a large quantity of her copper.	Wr. 31
l.	Unknown	£150 London.	None	Unknown	None		Dismasted Partial.	near S. Bishops. Heavy sea struck the ship in a gale, and to prevent her driving cut away the masts, and got towed into Milford.	Wr. 2732
	Unknown	Unknown	Unknown	Unknown	2		Stranded Total.	on the outer rock of Guthen Buss, near Tol Peden, Penrith. Made Scilly lights, and lost sight of them. Weather thick. Made another light, which took to be Seven Stones, and soon after struck on a sunken rock and went to pieces. Lead hove.	Wr. 24 ,, 30
	£150	Unknown	Nil	Unknown	None		Damaged Partial.	by fire at Bristol, supposed to have originated through a lighted pipe or lucifer matches which were left in a bed-berth.	Wr. 252 ,, 271
wn	Unknown	Trieste	Unknown	Unknown	-		Stranded - Partial.	eastward of Porthcawle pier while running in for safety. Was first warned by coast guard signal, then let go anchor in error, and not being able to hold on or make the harbour drove on the beach and was much damaged.	Wr. 42 ,, 436
l.	Unknown	Unknown	Nil	Unknown	-		Stranded - Partial.	eastward of Porthcawle, having become unmanageable by loss of sails and spars, and not able to make the harbour, ran on shore to save lives and vessel. Seriously damaged.	Wr. 42 ,, 437
	Unknown	Unknown	Unknown	Unknown	None		Stranded - Partial.	on Pill, near Portishead. Parted from both anchors, and chains and windlass carried away. Ran for King Road to avoid sinking. Got off and discharged for repairs.	Wr. 48
	Unknown	Not	Nil	Not	None		Dismasted Partial.	while at Anchor in Caldy Roads. Very deeply laden, and not only driving but sea breaking over her fearfully. Cut away her masts to save her.	Wr. 194
	Unknown	Unknown	Unknown	Unknown	None		Stranded - Partial.	on Hubberstone Pill. Anchors coming home during a severe gale, drove on the rocks, and compelled to discharge cargo to get her off.	Wr. 136
ot.	Unknown	Not	Unknown	Unknown	None		Dismasted Partial.	while at anchor in Caldy Roads. Masts cut away in a heavy gale to avoid driving on board a ship riding in her wake.	Wr. 195
	Unknown	Not	Total	Not	None		Stranded Total.	on Hubberston Pill. Riding with 2 anchors, came home, drove, and struck with great force on the sands, and sustained so much damage as to become nearly worthless.	Wr. 237
yd's	Unknown	Not	Unknown	Unknown	None		Stranded - Partial.	under the cliff at Milford. Drove from her anchors in the storm of 3d January and went ashore; will discharge and repair.	Wr. 283
ot.	£300	Not	£50	Not	None		Wrecked - Total.	on Breaksea Point; became leaky in bad weather, and when it seemed probable to save the ship another squall took her, she bilged and became a total wreck.	Wr. 256
	£1,200	£300	Nil	Nil	None		Stranded Total.	on Fowyn Sands, Kidwelly, in Carmarthen Bay; loss of sails; heavy and thick weather, and error in judgment on part of master; ran ashore, and became total loss.	Wr. 437
	£500	Not	Nil	Nil	None		Abandoned Total.	Sprung a leak 3 miles E.S.E. from Tenby; sand ballast washing about choked pumps; baled out to no purpose, and finding water gaining, anchored, and finally abandoned her. She went down soon afterwards.	Wr. 466
wn	Unknown	Unknown	Unknown	Unknown	4		Abandoned Total.	near Trevose Head; boarded by coast guard who found her anchor chain out, and the anchor broken and boat gone; took her into Padstow, derelict.	Wr. 459 ,, 365 ,, 514
wn	Unknown	Unknown	Unknown	Unknown	5		Stranded Total.	in Trevethick Bay, Padstow; let go an anchor, and was so long letting go the second one that she drove ashore, and went to pieces; crew got into the boat, which capsized, and all were drowned.	Wr. 366 ,, 459 ,, 549
months	£2,000	Not	£80	Not	None		Stranded Total.	in Ives Bay, near Trevose Head; a storm from the W.N.W.; not able to keep off a lee shore, run into the bay; let go two anchors, which dragged, and she came on shore, and became a wreck.	Wr. 378
l.	Unknown	£700. London	Unknown	Unknown	None		Dismasted Partial.	70 miles S.W. of Saltees, in a furious gale and high sea, which struck the ship and laid her on her beam ends; bore up for Milford, much damaged, to discharge and repair.	Wr. 314
l.	Unknown	Not	None	Unknown	None		Stranded Partial.	on the rocks near Milford; came to an anchor; wind increased to hurricane; parted both anchors, and drove in rocks; struck heavily; lightened, and got into Hubberstone Pill.	Wr. 325

Return of Vessels in Distress (otherwise than by Collision) in the Bristol Channel, from

Date of Casualty.	Name of Vessel. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind.		Weather.	Hour and Time of Tide.
							Direction.	Force.		
1	2	3	4	5	6	7	8	9	10	11
1857. (115) Jan. 14	Maria and Martha, of Milford.	Schooner	58	4	Newport to Liverpool	Coals	S.W.	11	Thick	6 30 A.M.
(116) „ 16	Forrester, of Cork	Schooner	63	5	Chichester to Liverpool	Timber	S.W.	11	Thick	11 A.M.
(117) „ 18	Sincerity, of Cardigan	Schooner	59	4	Par to Gloucester	Stone	W. by N.	6	Thick	8 P.M.
(118) „ 19	Frederick, of Dublin	Bark	270	13	Cardiff to Marseilles	Coals	N.W.	10	Bad	–
(119) „ 20	Emma, of Dublin	Brig	163	9	Dublin to Cadiz	Indian corn	W.S.W.	10	Cloudy	2 A.M.
(120) „ 22	Splash, of Bideford	Sloop	30	3	Porthcawl to Bideford	Coals	E.S.E.	1	Fine	3 A.M.
(121) „ 24	Speculator, of Exeter	Smack	21	2	Saundersfoot to Pembroke	Culm	N.N-E.	9	Clear	–
(122) „ 26	Mary Ann, of Llanelly	Schooner	83	5	Llanelly to Guernsey	Coals	W.S.W.	11	Thick	11 40 A.M.
(123) „ 27	Royal Adelaide, of London	Steam ship	437	31	Cadiz to Cardiff	Ballast	N.E. by E.	7	Clear	9 P.M.
(124) „ 29	Bottereaux Castle, of Padstow.	Smack	100	3	Falmouth to Swansea	Ballast	E.N.E	7	Dark and snowy.	3 A.M.
(125) „ 30	Martha, of Bridgewater	Smack	23	2	Cardiff to Bridgewater	Coals	W.S.W.	5	Fine	4 30 P.M.
(126) Feb. 5	Mary Sophia, of Sunderland	Brig	261	10	Bordeaux to Stettin	Ballast	Variable	3	Thick	4 30 A.M.
(127) „ 6	Jane, of Truro	Schooner	56	4	Newport to Truro	Coals	N.E.	7	Squally	11 P.M.
(128) „ 12	Camden, of Aberystwith	Schooner	69	5	Neath to Saltney	Iron	S.S.W.	9	Thick	2 A.M.
(129) „ 15	Belle Poule, of Liverpool		334	14	Liverpool to Monte Video	General	W. by N.	9	Hazy	3 A.M.
(130) „ 28	Nicolai et Jovan, of Trieste	Ship	700	18	Cardiff to Trieste	Ballast	Variable	2	Fine	–
(131) „ 28	Isabella Croll, of Liverpool	Schooner S.S.	421	16	Whitehaven to Cardiff	Iron ore	Variable	2	Hazy	5 30 „
32) Mar. 13	Juanita, of Bilbao	Lugger	84	7	Swansea to Seville	Coals	W.S.W.	8	–	4 P.M.
(133) „ 14	Atlantic, of Sweden	Ship	617	19	Cardiff to San Francisco	Coals	S.W.	11	Squally	11 P.M.
(134) „ 14	Haberdine, of Teignmouth	Schooner	53	4	Neith to Teignmouth	Coals	W.N.W.	11	Squally	9 30 A.M.
(133) „ 14	La Desirée, of Auray	Schooner	122	8	Cardiff to Nantes	Coals	N.W.	11	Squally	9 A.M.

the Land's End, including the Scilly Islands, during the Years 1856 and 1857—*continued.*

Age, assed 's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. — Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
	14	15	16	17	18	19	20	21	22
l.	Unknown	£200. London	None	Not	None	- - - -	Stranded Partial.	near the old dockyard, Milford; drove from her anchors in a gale of wind; became bilged; bottom stove in; master got her off after great exertions.	Wr. 370
t.	Unknown	Not	None	Unknown	None	- - - -	Stranded Partial.	near Old Dock, Milford; came to an anchor off Hubberstone Pill; vessel began to drive; let go best bower, when gale blew with such violence that anchors came home, and she drove broadside on the beach; got off to discharge and repair.	Wr. 412
l.	£350	London	£200	Not	None	- - - -	Stranded Total.	on Nash Sands; thick weather; saw breakers on lee bow; put helm down, then missed stays and went ashore on Nash Sands; vessel filled and sunk; lead not hove, the line being lost.	Wr. 511
l.	Unknown	Unknown	Unknown	Unknown	None	- - - -	Disabled Partial.	50 miles from the Smalls; lost her rudder in a heavy sea, and put into Scilly to repair.	Wr. 548
l.	Unknown	Unknown	Unknown	Unknown	None	- - - -	Dismasted Partial.	off St. Agnes Light, Scilly; blowing strong with heavy head sea, which struck her and threw her on her beam ends; put into Scilly to discharge and repair.	Wr. 624
t.	£600	Not	£25	Not	None	- - - -	Stranded Total.	on Wharfhouse Point, Barnstaple; soon after pilot left wind died away, and as the anchor was not ready to be let go, she drifted on the rocks and became a wreck.	Wr. 574 „ 545
	Total	£250. Topshaw	Total	Unknown	1	1, by "Elizabeth and Mary."	Wrecked Total.	on Crowstoe Rock off Lenny Head; tried to make the land for shelter, but she would not stay; wore round; squall threw her on her beam ends, and sea breaking over her, became total wreck; bilged and sunk.	
ot.	Unknown	Not	None	Unknown	None	- - - -	Stranded Partial.	on rocks near Milford; drove with her anchors in a terrific gale, and dashed on the rocks by which her keel was broken and bottom much damaged, got off, taken to Hubberstone Pill.	Wr. 577
d.	Unknown	London	Nil	Nil	None	- - - -	Stranded Partial.	on the bar at entrance to Padstow Harbour; not being able to get a pilot, missed the channel, caught on the bar, straining very much.	Wr. 597
	Unknown	Not	Nil	Nil	None	- - - -	Stranded Partial.	in Padstow Harbour, brought up in the harbour with one anchor; ground being bad for holding, and second anchor not ready, went on the rocks, and knocked away keel and bilge pieces.	Wr. 664.
ot.	£100	Not	Unknown	Unknown	3	- - - -	Foundered Total.	in Penarth Roads; seen from the shore suddenly to lurch over, and go down stern foremost with all hands.	Wr. 693 „ 718
d°.	Unknown	Unknown	Nil	Nil	None	- - - -	Stranded Total.	on Aberavon Sands; and was lost through the negligence and want of sobriety on the part of the master and mate, who took no steps to relieve the ship.	Wr. 679 „ 803
ot.	£250	Not	£50.	Not	None	4, by Steam-ship "James Brown."	Abandoned Partial.	2½ leagues S. off Land's End, having sprung a leak, lost sails, and otherwise damaged by stress of weather.	Wr. 714 „ 702
l.	Unknown	Aberystwith	None	Unknown	None	- - - -	Leaky Partial.	off Caldy, Bristol Channel; cargo shifted through bad weather, breaking both pumps and causing her to strain and leak; put into Milford for repair.	Wr. 705
l.	Unknown	London	None	Unknown	None	- - - -	Dismasted Partial.	off Bardsey; ship in a gale, plunging violently into the sea, sprung bowsprit, and carried away jibboom; put into Milford to discharge and repair.	Wr. 725
ot.	Total	£6,000. Trieste	Nil	Nil	None	- - - -	Stranded Total.	on the east mud Penarth; about to be docked, but too late; was anchored in the mud, and fell over so much as to be unable to righten; at flood tide, became a wreck.	Wr. 823
l.	Unknown	Unknown	Unknown	Unknown	None	- - - -	Struck Partial.	upon an anchor or some substance unknown, two miles from Penarth, probably the anchor of the ship. Master said to be lax in his efforts to save the vessel.	Wr. 823
	Unknown	Unknown	Unknown	Unknown	None	- - - -	Stranded Total.	in Swansea Bay; parted one chain, brought up with the other in bad berth, could not get pilot, struck heavily, and after hours of pumping was run on shore, where she will become total wreck.	Wr. 841
	£500	Unknown	Nil	Unknown	None	- - - -	Dismasted Partial.	56 miles N.N.E. off Old Head, of Kinsale in a heavy squall masts went overboard and quantity rigging; bore up for Bristol for repairs.	Wr. 862
l.	£600	£500 Western Clubs and Lloyd's.	£40	Unknown	None	4, by lifeboat	Stranded Total.	at entrance to Padstow Harbour; ran for shelte. in harbour in heavy gale and sea, and no pilot being at hand, and no assistance given, vessel drove on the rocks and became a wreck.	Wr. 891 „ 892
ths	£2,000	£1,000 Paris, Brest.	£100	Unknown	1	- - - -	Wrecked Total.	at entrance to Padstow Harbour; let go the anchor, which drifted; let go best bower; vessel still dragged and got into breakers, where it was knocked to atoms; one man washed overboard.	Wr. 890 „ 908

Return of Vessels in Distress (otherwise than by Collision) in the BRISTOL CHANNEL, from

Date of Casualty. 1	Name of Vessel. Port of Registry (if known). 2	Rig. 3	Tons. 4	Men. 5	From. Bound to. 6	Cargo. 7	Wind. Direction. 8	Wind. Force. 9	Weather. 10	Hour and Time of Tide. 11
1857. (136) Mar. 20	Truro, of Truro	Schooner	90	6	Cardiff to London	Iron	S.W.	9	Stormy	11 P.M.
(137) " 21	Velox, of Cardigan	Schooner	48	4	Swansea to Dordrecht	Iron	E.S.E.	9	Cloudy	2 30 P.M.
(138) " 21	Morfa, of Swansea	Smack	37	3	Bristol to Swansea	Geheral	S.E.	9	Fine	10 A.M.
(139) " 23	Sarah, of St. Ives	Schooner	125	6	Neath to Hayle	Coals	N.E.	9	Squally, snow and sleet.	1 30 A.M.
(140) " 27	Amelia, of Bristol	S.S.	167	16	Bristol to Liverpool	General	S.	4	Thick fog	8 P.M.
(141) " 29	Trevaunance of St. Agnes	Schooner	70	4	St. Agnes to Swansea	Ore	S.E.	6	-	2 A.M.
(142) April 1	Hedvig, of Bremen	Barge	277	12	Newport to St. Thomas	Coals	S.W.	1	Clear	10 30 A.M.
(143) " 10	Gem, of Cardiff	Brig	181	8	Cardiff to Smyrna	Iron	W.N.W.	10	Bad	-
(144) " 14	Mary Ann Peters, of Bristol	Barge	445	20	Bristol to Africa	General	S.W.	2	Cloudy	10 41 A.M.
(145) " 17	Gesina, of Groningen	Galleon	64	4	Cardiff to Liverpool	Coals	W.S.W.	9	Thick	1 P.M.
(146) " 19	Clifton, of New York	Ship	667	17	Newport to New York	Iron	S.	11	Bad	-
(147) " 20	Elizabeth, of Padstow	Brig	165	7	Newport to Padstow	Coals	S.S.W.	9	Squally	Midnight
(148) " 25	John Shelly, of Yarmouth	Brig	115	6	Swansea to Dordrecht	Pig Iron	S.S.W.	9	Thick	2 A.M.
(149) May 4	Packet, of Minehead	Smack	29	4	Minehead to London	Flour, &c.	E.N.E.	7	Squally	12 Noon
(150) " 16	Maid of Erin, of Cork	Schooner	100	6	Newport to Cork	Coals	W.N.W.	4	Fine	8 30 A.M.
(151) June 1	Voluna, of Padstow	Brig	336	12	Falmouth to Quebec	Ballast	S.	4	Thick (Very.)	12 30 A.M.
(152) " 24	Maas, of Rotterdam	S.S.	168	12	Cardiff to Rotterdam	General	Calm	0	Thick fog	10 30 A.M.
(153) " 26	Margaret, of Plymouth	Schooner	92	5	Neath to Plymouth	Culm	S.E.	4	Fine	0 30 P.M.
(154) July 4	Rocket, of Truro	Schooner	91	6	Truro to Llanelly	Copper Ore	N.W.	9	Stormy	2 P.M.
(155) " 6	Castle, of Newport	Schooner	40	1	Port Talbot to Porthcawl	Tin, Cinders.	-	8	-	-
(156) " 7	Theodore, of London	Bark	249	11	Port Talbot to Sweden	Coke, &c.	W.N.W.	5	Clear	6 A.M.
(157) " 9	Cawton, of Scarborough	Brig	238	10	Demerara to Bideford	Timber	N.W.	5	Fine	12 noon

the Land's End, including the Scilly Islands, during the Years 1856 and 1857—*continued.*

Age, ssed s List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. — Remarks.	Authority.
	Estimated Loss on. 14	Insured for, and where. 15	Estimated Loss on. 16	Insured for, and where. 17	18	19	20	21	22
	£90	Not	Nil	Unknown	None	- - - -	Stranded Partial.	on the Longships, 7 miles from Land's End; struck by a sea which carried away masts and sails, and gave her 4 strakes list, so that she became leaky; put into Truro for repairs.	Wr. 966
	Unknown	Unknown	Unknown	Unknown	3	1, by Garland, pilot cutter.	Wrecked Total.	on Shipman Head, Scilly Isles; missed stays, and drove on the rocks; bilged, filled, and went down; crew got into boat which capsized, and 3 were drowned.	Wr. 967 „ 1043
t.	£150	Not	Unknown	Unknown	None	- - - -	Stranded Partial.	in gale of wind S.W. of the Kymin, near Swansea; missed stays, and not having room to bring up, drove ashore; the second anchor was inboard, and the chain so placed that it could not be got ready in less than an hour.	Wr. 987
t.	£1,300	St. Ives	£60	Not	None	- - - -	Wrecked Total.	on Faddacoat Cliff; blowing hard; should have stood outside Lundy Island and hove the lead; vessel broke up, and became total wreck.	Wr. 1013 „ 1066
	Unknown	Unknown	Unknown	Unknown	None	- - - -	Foundered Total.	off St. Gowan's Head; ran on rocks in a thick fog.	Wr. 1050
n	Unknown	Unknown	Unknown	Unknown	1	3, by boat from shore	Stranded Total.	on Hugo Bank, Porthcawl; weather very thick, no pilot offering, kept her to windward, when she struck; filled and sunk.	Wr. 1069 „ 1156 „ 1151
	Unknown	£2,000 Bremen	None	Unknown	None	- - - -	Leaky Partial.	in Bristol Channel; tried the pumps; found leak increasing; put back to Newport to discharge and repair.	Wr. 1158
n	Unknown	Unknown	Unknown	Unknown	None	- - - -	Leaky Partial.	in Bristol Channel; obliged to carry sail to keep ship off the land; she laboured heavily, and made much water; ran for Padstow to discharge and repair.	Wr. 1365
13 years ew.	Unknown	£2,000	Unknown	£11,000	None	- - - -	Stranded Partial.	at Rounham Ferry Slip, Bristol; left at high water and grounded; the tide falling, it was impossible to get her off until next springs; got off and into dock for repairs after discharging cargo.	Wr. 1177
t.	Nearly total.	£300. Groningen Pekela.	2/3 of cost	Not	None	4, by line from shore	Stranded Partial.	on Marlous Sands; owing to a thick fog; ship got close to land, became embayed, and could not beat out. Nearly total loss.	Wr. 1319
n	Unknown	New York	Unknown	Unknown	None	- - - -	Leaky Partial.	in Bristol Channel, through bad weather; bore up for Cork to discharge and repair.	Wr. 1362
	Unknown	Unknown	Unknown	Unknown	None	7, by own boat	Foundered Total.	5 miles from Clovelly; weather very bad; put back to Bideford; sprung a leak, and finding her in a sinking state, left her, when she sunk. Master might have beached her, and prevented it.	Wr. 1251
d*	-	Yarmouth	None	Unknown	None	- - - -	Leaky Partial.	in Bristol Channel, and laid on the mud at Hubberstone Pill, to discharge cargo.	Wr. 1338
ot.	£50	Not	£50	Not	None	- - - -	Leaky Partial.	in River Avon, opposite Pill; anchored in river too late, previous tide. Sheered ashore; when she floated, drove foul of her anchor, the stock of which went through her bottom, and caused her to sink. Recovered and taken to Bristol.	Wr. 1372
	Unknown	Not	Unknown	Not	None	- - - -	Stranded Partial.	west of Breaksea Point; ran ashore by standing too long on the port tack; all hands supposed to have been asleep; cargo discharged. May be got off.	Wr. 1396
	Unknown	Unknown	Unknown	Unknown	None	12, in own boats	Stranded Total.	on St. Agnes, Scilly Islands; very thick weather; master set course which would have carried him 6 miles clear of the islands, but for the northerly set of tide. Lead not hove; vessel refused stays.	Wr. 1438
	Unknown	Unknown	Unknown	Unknown	None	24 crew and passengers by ship's boats.	Stranded Total.	on Greet Point, between Cape Cornwall and Gurnard's Head; vessel going at full speed in a thick fog, and no lead hove.	Wr. 1484 „ 1494
	£500	Not	£45	Not	None	5 by their own boat	Stranded Total.	on Peal point, Land's End; making too free with the point, struck on sunken rock and became a wreck.	Wr. 1490
	Unknown	£600	Unknown	Unknown	None	- - - -	Dismasted Partial.	10 miles W. of Lundy. Lost foremast, main-topmast, sails, &c.; and making water, put into Llanelly to discharge.	Wr. 1550
	Unknown	Nil	Unknown	Nil	None	- - - -	Wrecked Total.	off Porthcawl. Not being able to procure assistance took vessel to sea alone. Came on to blow; let go the anchor; struck and sunk in 10 fathoms water.	
	Unknown	Hartlepool and Lloyd's.	Nil	Unknown	None	- - - -	Stranded Partial.	on Port Talbot while in tow and while in charge of pilot, who thought there was plenty of water on the bar, which was not the case, being only a heavy swell.	Wr. 1684
	Unknown	Scarboro'	Nil	Unknown	None	- - - -	Capsized Total.	near Appledore. Pilot moored her on the edge of the bank of the river, and the sand washing away she fell over on her beam ends, and fills as the tide flows.	Wr. 1889

Return of Vessels in Distress (otherwise than by Collision) in the BRISTOL CHANNEL, from

Date of Casualty.	Name of Vessel. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind.		Weather.	Hour and Time of Tide.
							Direction.	Force.		
1	2	3	4	5	6	7	8	9	10	11
1857. (158) July 18	Louis Charles	Lugger	70	6	Cardiff to Bordeaux	Coals	S.W.	3	Fine	6 A.M
(159) „ 25	Brian Boru, of Liverpool	Schooner	75	4	Charlestown to Glasgow	Clay	S.S.W.	9	Thick	Flood tide, 2 A.M.
(160) Aug. 1	Ithuriel, of Teignmouth	Brigantine	145	6	Glasgow to Rouen	Pig Iron	N.N.W.	5	Fine	5 P.M.
(161) „ 5	Eleanor, of Barmouth	Schooner	32	3	Gloucester to Folkestone	Salt	W.	4	Clear	1 15 P.M.
(162) „ 14	Troubadour, of Sunderland	Brig	48	9	Cardiff to Athens	Coals	N.E.	5	Hazy	9 P.M.
(163) „ 14	Commodore, of Jersey	Cutter	59	6	Swansea to Havre	Coals	N.N.E.	3	Fine	1 A.M.
(164) „ 17	Hero, of Falmouth	Schooner	68	4	Plymouth to Hayle	Lime	N.E.	3	Foggy	8 30 P.M.
(165) „ 19	Three Sisters, of Aberystwith	Schooner	64	4	Newport to Liverpool	Iron	N.E.	2	Hazy	10 P.M.
(166) „ 25	Bruce, of Newcastle	Brig	306	16	Swansea to London	Fuel	S.W. by S.	0	Clear	2 A.M.
(167) Sept. 12	Fusilier, of Liverpool	Ship	503	19	Valparaiso to Liverpool	Copper	S.	5	Thick fog	Midnight
(168) „ 17	Australia, of Wiscassett	Brig	122	7	Newport to ——	Coals	S.E.	6	Thick	-
(169) „ 19	G. W. Hall, of Providence	Bark	355	11	Newport to N. Carolina	Iron	S.W.	8	Heavy	-
(170) „ 21	Elspeth, of London	Bark	281	13	Newcastle to Martinique	Coals	E.	6	Clear	-
(171) Oct. 6	Mary, of Waterford	Brigantine	108	6	Cardiff to Waterford	Coals	S.S.E.	9	Cloudy	10 A.M.
(172) „ 7	Newton, of Bideford	Schooner	53	3	Oxwich to Bideford	Limestone	S.E.	10	-	6 A.M.
(173) „ 7	Alarm, of Southampton	Schooner	168	7	Newport	Coals	S.S.E.	7	Hazy	10 30 P.M.
(174) „ 7	French lugger	Lugger	70	4	Unknown	Ballast	S.S.W.	10	Gale	3 P.M.
(175) „ 8	Jane Maria, of London	Brig	195	10	Swansea to Fayal	Coals	W. by N.	9	Hazy	9 P.M.
(176) „ 8	Warden, of Boston, U.S.	Barque	406	11	Newport to Cuba	Iron	W.N.W.	10	Thick rain	4 A.M.
(177) „ 8	Fancy, of Weymouth	Schooner	78	5	Neath to Southampton	Coals	N.N.W	6	Squally	6
(178) „ 15	Angelina, of Cardigan	Brigantine	96	6	London to Galway	Guano	W.	8	Clear	8 A.M.
(179) „ 7	Union, of Portsmouth	Schooner	50	5	Swansea to Seville	Coals	S.E.	10	Fine	7 P.M.
(180) „ 18	Mary Welsh of St. Ives	Brig	116		Cardiff to Hayle	Coals	E.N.E.	6	Thick heavy squalls.	12 midnight
(181) „ 22	Earl of Errol, of Irvine	Brig	95	6	Newcastle to Dublin	Coals	N.E.	9	Clear	9 P.M.

to the Land's End, including the Scilly Islands, during the Years 1856 and 1857—*continued.*

l's Age, and classed yd's List. 13	Vessel.		Cargo.		Lives lost. 18	Number of Lives saved, and by what Means. 19	Nature of Casualty, and whether occasioning Total Loss or only partial Damage. 20	Site and Cause of Casualty. — Remarks. 21	Authority. 22
	Estimated Loss on. 14	Insured for, and where. 15	Estimated Loss on. 16	Insured for, and where. 17					
s	Unknown	Unknown	Unknown	Unknown	None		Foundered Total.	off Lundy Island 10 miles; sprung a leak, which could not be overcome by the pumps, and sunk.	Wr. 1649
s ed	Unknown	Bangor	Unknown	Unknown	None		Dismasted Partial.	off the Longships by a sudden squall, by which masts were completely carried away, and sea breaking over her, cut away the wreck, and were assisted into Pembroke for repairs.	Wr. 1697
iths 7 years.	£100	Topsham. £1,400	Unknown	Unknown	None		Dismasted Partial.	4 miles from Cape Cornwall. Ship rolling in heavy sea, carried fore-top-mast, top-gallant-mast, split sails, and much injured the vessel. Put into Hayle for repairs.	Wr. 1696
s E 1.	Total	Unknown	Total	Unknown	None	3 by "Six Brothers"	Foundered Total.	5 miles from Helwick Light and 111 from Caldy; having sprung a leak, which gained on them until she sank.	Wr. 1711
8 years.	Unknown	Yes	None	Yes	None		Leaky Partial.	20 miles W. of Lundy Island, and seriously damaged, caused by the caulking being loose.	Wr. 1829
rs ted	Unknown	£400. Jersey	Unknown	Unknown	None		Dismasted Partial.	off Lundy Island N.N.E. 6 miles; strong and sudden squalls broke the mast. Proceeded to Appledore to repair.	Wr. 1730 " 1740
own Not.	Unknown	Not	Unknown	Not	None		Stranded Total.	1 mile S. of Cape Cornwall. Saw Long-ship Light, but took no bearings, and did not know the draft of water of his vessel. Struck on the rocks, and abandoned by crew. Vessel recovered by C.G.	Wr. 1755 " 1757 " 1765
s ted	£600	Unknown	£1,000	Not	None		Wrecked Total.	on Monckstone Rock, Bristol Channel. Struck on ebb tide, and as tide flowed she fell over and sunk in deep water. Night being hazy, master deceived in the distance from Holy Light.	Wr. 1759 " 1769
wn	Unknown	London	Unknown	Unknown	None		Leaky Partial.	off St. Ives's head; could not keep it under, and being in a sinking state, ran her upon the ground at the entrance of the harbour; started stern frame and strained decks.	Wr. 1783
s	£11,000	London and Liverpool.	£50,000	London & Liverpool.	None		Wrecked Total.	on St. Gowan's Head, Ballslaughter Bay. Strong tides, mistaken reckoning, thick weather, and neglect of the lead.	Wr. 1876 " 1886
n	Unknown	Unknown	Unknown	Unknown	None		Leaky Partial.	off Lundy Island. Strong gale springing up, sprung a leak, which increasing rapidly, put into Cork to discharge and repair.	Wr. 1874
n	Unknown	Unknown	Unknown	Unknown	None		Leaky Partial.	off Lundy Island; mainmast and gear all injured by rolling in heavy cross sea. Put into Cork to discharge and repair.	Wr. 1878
	Total	Unknown	Total	Unknown	None		Foundered Total.	40 miles S.S.E. of Scilly. Sprung a leak under the breast-hooks; water gaining rapidly, and pumps choked, abandoned her, when she went down.	Wr. 1908
rs Not.	Unknown	Not	Unknown	Not	None		Stranded Total.	on Penarth Roads. Blew very heavily; tide ebbed; caught on the bank of the cut, and being very sharp turned over and sunk.	Wr. 1998
	Unknown	Unknown	Unknown	Unknown	None		Stranded Partial.	in Oxwich Bay, S. Wales. Lost her bowsprit in a gale, and came ashore greatly damaged.	Wr. 2102
rs l. Red.	£40	£1,000. Topsham	None	Unknown	None		Damaged Partial.	30 miles S.W. Lundy Island. Bulwarks and everything on deck blown away; sails destroyed, and other damage Put into Milford to repair.	Wr. 2139
m	Unknown	Unknown	Unknown	Unknown	4		Wrecked Total.	off at entrance of Burry River; particulars cannot be ascertained.	Wr. 11,366
own	London	None	Unknown	Unknown	None		Leaky Partial.	in Mumble's Roads. Heavy sea strained the ship, and after ineffectual efforts to get to sea, obliged to put back to be overhauled, and discharged for repairs.	—
	Unknown	Unknown	Unknown	Unknown	7		Stranded Total.	north end of Braunton Sands; mistook Hartland Point for Baggy Point. Got on the rocks, and went to pieces.	Wr. 2 044 " 2,024
	Unknown	£60	Unknown	Unknown	None		Struck on anchor. Total.	at entrance of Padstow Harbour. Getting under weigh to fall in with the breeze, she slewed round; let go anchor, which went through her bottom, and she sunk. Should have laid out a warp.	Wr. 2,046 " 2,030
own	Unknown	None	Unknown	Unknown	None		Dismasted Partial.	40 miles S. by E. of Cape Clear. In heavy squall; put into Milford to discharge and repair.	Wr. 2,108
	Unknown	£600	Unknown	Unknown	None		Abandoned Total.	in St. Ives Bay. Could not fetch St. Ives bay. Vessel laboured, and pumps kept going, found a leak, which kept gaining until the crew resolved to abandon her. Found by the pilot boat at Hayle.	Wr. 2164 " 2167
rs d	£1,200	St. Ives, £700	£100	Unknown	6		Stranded Total.	off Godrevy Rocks, on the inner stones; masts above water, and all hands perished.	Wr. 2,421
rs	Total	Not	Total	Not	None		Wrecked Total.	on the east side of St. Ann's Head, Milford Haven. Sprung a leak; filled; became unmanageable; struck on the rocks; bilged, and became a wreck. Assistance declined by the master.	Wr. 2,329 " 2,382

Return of Vessels in Distress (otherwise than by Collision) in the BRISTOL CHANNEL, from St

Date of Casualty.	Name of Vessel. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind.		Weather.	Hour and Time of Tide.
							Direction.	Force.		
1	2	3	4	5	6.	7	8	9	10	11
1857. (182) Nov. 4	Frederick, of Dublin - -	Smack -	50	4	Destination unknown -	Coals -	N. -	8	Thick, with rain.	1 P.M. - -
(183) „ 5	Florence Dombey, of Liverpool.	Brig -	142	7	Newport to Santander -	Iron -	S.S.W. -	7	Clear -	12 30 P.M. -
(184) „ 5	Morton, of St. Ives - -	Schooner	90	6	Swansea to Portreath -	Coals -	N.N.E. -	2	Cloudy -	6 30 P.M. -
(185) Dec. 4	Chester, of Southampton -	Schooner	97	6	Southampton to Port Talbot	Timber -	Calm -	0	Fair -	9 A.M. - -
(186) „ 14	Lord Porchester, of Padstow	Smack -	28	2	Swansea - -	Copper Ore	S.S.W. -	4	Clear -	midnight -
(187) „ 29	Shakespeare, of London -	Barge -	612	22	Newport to St. Thomas -	Coals -	W.S.W.	5	Clear -	8 P.M. - -

l to the Land's End, including the Scilly Islands, during the Years 1856 and 1857—*continued.*

sel's Age, and r classed oyd's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. — Remarks.	Authority
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
13	14	15	16	17	18	19	20	21	22
iown -	Unknown	Unknown -	Unknown	Unknown	- -	- - - -	Abandoned Total.	found at anchor off Lundy, abandoned by her crew. Got off by the master and crew of the "Ranger," and taken into Clovelly in a sinking state.	Wr. 2,333
rs - - l.	£300 -	£500 - -	Unknown	Unknown	None -	- - - -	Leaky - Partial.	in Bristol Channel; when a moderate gale sprung up, and ship became very leaky. Not being able to reduce it, put back to Milford.	Wr. 2,348
rs - - l.	£1,100 -	£800 Lloyd's - £300 St. Ives.	£80 -	Not -	None -	- - - -	Wrecked Total.	at entrance of Portreath Harbour; struck on a rock, and lost her rudder; light winds with heavy ground swell, mistook the light in a shop for harbour light.	Wr. 2,377 " 2,365
- -	Unknown	Shoreham -	Unknown	Not -	None -	- - - -	Stranded-Partial.	at Port Talbot; two hours ebb tide and wind died away; lost steerage-way, and drove out of channel on the sands.	Wr. 2,523
rs -	£140 -	Unknown -	Unknown	Unknown	None -	Two, by a fisherman -	Foundered Total.	18 miles S.S.W. of Trevose Head, having suddenly sprung a leak, which could not be kept free.	Wr. 2,597 " 2,606
rs - k Dipth.	£100 -	Lloyd's - -	Nil - -	Nil -	None -	- - - -	Leaky - Partial.	East of Ilfracombe, and seriously damaged; having heavy cargo on board; and ship having been much neglected in caulking, &c. while under repair.	Wr. 2,651

The Letters and Figures in Column 22 of this Return refer to the Registered Number and the Description of the ocuments from which the Information is extracted:—"Wr." stands for a Wreck Return; and "Dep." for a Depo-ition, or Statement on Oath made before a Receiver under the 448th section of the "Merchant Shipping Act, 1854."

SUMMARY

OF THE

PRECEDING RETURN OF VESSELS IN DISTRESS (OTHERWISE THAN BY COLLISION)

IN THE

BRISTOL CHANNEL,

During the Years 1856 and 1857.

TABLE 1.—Wrecks and Casualties, distinguishing Total from Partial Losses, and Vessels with Cargoes from Vessels in Ballast.

Casualties resulting in **total** losses; viz.:—		
To Vessels in ballast	11	
To Vessels with cargoes	70	
[*] To Vessels whether with cargoes or in ballast, unknown	2	
		83
Casualties resulting in **partial** losses; viz.:—		
To Vessels in ballast	7	
To Vessels with cargoes	89	
To Vessels whether with cargoes or in ballast, unknown	0	
		96
Casualties, whether resulting in total or partial losses, unknown:—		
To Vessels in ballast	1	
To Vessels with cargoes	7	
		[†] 8
Total		187

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[*] These 2 vessels are included in the loaded vessels in Tables 5 and 6.

[†] These 8 vessels are apportioned in Tables 5 and 6 as 5 partial losses and 3 total losses.

TABLE 2.—Wrecks and Casualties, arranged according to the Places at or near which they happened; and also according to Districts; and showing the Number in the Return under which each Casualty is to be found.

PLACES.

Aberavon Sands, 126 -	1
Aberthaw Harbour, 24 -	1
Appledore Harbour, 21. 157	2
Avon (River), 17. 149 -	2
Barnstaple, 120 - -	1
Barry Island, 56. 94 -	2
Bishops, N. and S., 77. 96 -	2
Burry River, 8. 82. 174 -	3
Braunton Sands (Devon), 39. 176 - - - -	2
Breaksea Point, 72. 107. 150	3
Bristol, 98. 144 - -	2
Bristol Channel, 41. 142. 143. 146. 183 - -	5
Caldy and St. Margaret's (between) 75. 102. 104. 128 - - - -	4
Carmarthen, 51. 87. 108 -	3
Cardiff, 23. 37. 80. 90. 95 -	5
Clovelly, 44. 147 - -	2
Faddacoat Cliff, 139 -	1
Flat Holm, 15 - -	1
Godrevy Rocks, 180 -	1
Hartland Point, 59 -	1
Hedges Rock, 33 - -	1
Helwick Light, 161 - -	1
Hugh Ferry, 81 - -	1
Hubberstone Pill, 103. 105 148 - - - -	3
Carried forward -	50

Brought forward -	50
Ilfracombe, 187 - -	1
Land's End, 29. 31. 43. 46. 57. 127. 136. 153. 152. 159. 160. 164 - -	12
Lenny Head, 60. 83. 121 -	3
Llanelly, 1. 40 - -	2
Lundy Island, 35. 48, 74. 78. 85. 154. 158. 162. 163. 168. 169. 173. 182 - -	13
Milford, 14. 45. 86. 91. 92. 106. 114. 115. 116. 122. 129. 145. 181 - -	13
Monckstone Rock, 165 -	1
Mumbles Roads, 62. 63. 64. 65. 66. 67. 68. 69. 70. 175.	10
Nash Light Point and Sands, 18. 117 - - -	2
Oxwich Point and Bay (S. Wales), 13. 172 -	2
Padstow, 49. 54. 111. 123. 124. 134. 135. 177 - -	8
Penarth Roads, 16. 42. 125. 130. 131. 171 - -	6
Penrith, 97 - - -	1
Porthcawle, 6. 11. 52. 99. 100. 141. 155 - -	7
Portishead, 38. 101 -	2
Port Talbot, 156. 185 -	2
Portreath Harbour, 184 -	1
Carried forward . -	136

Brought forward -	136
Ramsay Island, 28 - -	1
Rockham Bay, 20 - -	1
Saint Ann's, 73 - - -	1
Scilly, 32. 34. 55. 58. 119. 137. 151 - - -	7
St. Gowan's Head 140. 167	2
St. Ives, 3. 12. 25. 27. 166. 179 - - -	6
Swansea, 26. 36. 53. 71. 79. 89. 132. 138. - -	8
Tenby, 88. 109 - -	2
Trevose Head and Light, 4. 30. 110. 112. 186 - -	5
Tuskar Rocks, 84 - -	1
Weston-super-Mare, 50 -	1
Sea, towed into Appledore, 47 - - - -	1
„ put into Bristol, 133	1
„ put into Cardiff, 10 -	1
„ off Cape Clear, 40 miles S. by E., put into Milford, 178 - -	1
„ put into Milford, 2. 9. 22. 61. 76. 93. 113 -	7
„ off Scilly, 170 - -	1
„ put into Scilly, 5. 19. 118 - - -	3
„ put into St. Ives, 7 -	1
Total -	187

DISTRICTS.

1. From St. David's Head to Point Eynon, 1. *2. 8. *9. 14. *22. 28. 33. 40. 41. 45. 51. 60. *61. 73. 75. *76. 77. 82. 83. 86. 87. 88. 91. 92. *93. 96. 102. 104. 106. 108. 109. *113. 114. 115. 116. 121. 122. 128. 129. 140. 145. 167. 174. *178. 181. *183. - - - - - - - - - - - - -	47
2. From Point Eynon to Cardiff, 6. *10. 11. 13. 16. 18. 23. 24. 26. 36. 37. 42. 52. 53. 56. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 79. 80. 84. 89. 90. 94. 95. 99. 100. 107. 117. 125. 126. 130. 131. 132. 138. 141. 150. 155. 156. 161. 171. 172. 175. 185. - - - - - - - - - - -	52
3. From Cardiff to River Axe, including the whole of the upper part of the Bristol Channel and the Holmes, 15. 17. 38. 50. 98. 101. *133. 142. 144. 149. 165. - - - - - - - -	11
4. From River Axe to Hartland Point, including Lundy Island, 20. 21. 35. 39. 44. *47. 48. 59. 74. 78. 85. 103. 105. 120. 139. 147. 148. 154. 157. 158. 162. 163. 168. 169. 173. 176. 182. 187. - - - - - -	28
5. From Hartland Point to Trevose Head, 49. 54. 110. 111. 123. 124. 134. 135. *143. 177. - - - - - - - -	10
6. From Trevose Head to the Land's End, 3. 4. *7. 12. 25. 27. 29. 30. 31. 43. 46. 57. 81. 97. 112. 127. 136. 152. 153. 159. 160. 164. 166. 179. 180. 184. - - - - - - -	26
7. The Scilly Islands, *5. *19. 32. 34. 55. 58. *118. 119. 137. 151. *170. 186. - - - - - - -	12
Not stated, 146. - - - - - - - - - - - - - -	1
Total - - - - -	187

Note.—The Casualties represented by the numbers marked thus * did not in many cases occur within the districts above named. They are, however, either included in the district nearest to which they appear to have happened, or in that to which the vessel were taken after the distress occurred.

TABLE 3.—Wrecks and Casualties, showing the Nature of the Casualties.

Abandoned from various causes - - - - - - - -	8
Burned (fire caused by spark from a pipe) - - - - - -	1
Capsized - - - - - - - - - - -	2
Explosion of coal gas generated under hatches - - - - - -	3
Foundered at sea and at anchors from various causes - - - - -	15
Leaky or dismasted and otherwise crippled (put in to repair) - - -	52
Stranded or struck on rocks and sands from various causes - - -	104
Struck on anchors or sunken wreck - - - - - - -	2
Total - - -	187

TABLE 4.—Wrecks and Casualties occasioning Loss of Life; distinguishing Loaded Vessels from Vessels in Ballast, and showing the Description of each Vessel and Cargo, the Number of Lives Saved and Lost in each Case, and the Date and Place of each Casualty.

(*a*) LOADED VESSELS:

No. in Return.	Name of Ship and Age, if known.	Rig.	Tons.	Men.	Cargo.	Loss on Property, whether partial or total.	No. of Lives lost	Date of Casualty.	Place.
6	Blanch, 12 years -	Schooner	80	4	Iron Ore - -	Total.	2	1856: 4 January	5 miles W. of Porthcawle.
7	Guillaume - -	Brig	191	8	Sugar - -	Partial.	2	18 January	Sea.
8	Amelia, 21 years -	Schooner	249	10	Grain - -	Total.	9	24 January	Burry River.
13	Catherine Jenkins, 11 years.	Barque	399	11	Copper - -	Total.	7	8 Feb. -	Bristol Channel.
14	Great Duke - -	Ship	1500	32	Cotton - -	Total.	29	8 Feb. -	Near Milford.
19	Flag of Truce - -	Barque	417	15	General - -	Partial.	1	19 Feb. -	Sea.
29	Hermes, 56 years -	Brig	268	9	Coals - -	Total.	6	28 March	Near Land's End.
38	Brothers - - -	Trow	60	3	Coals - -	Total.	1	7 May -	Bristol Channel.
40	Madam - - -	Schooner	95	5	Coals - -	Partial.	1	14 May -	Llanelly Bar.
80	Fred. Ridslaff, 7 months	Barque	467	14	Coals - -	Partial.	4	27 Oct. -	Cardiff.
97	Dunaskin, 3 years -	S.S.	122	12	Oranges - -	Total.	2	1857: 1 January	Near Tol Pedery, Penrith.
110	Ann - - -	Smack	90	4	Coals - -	Total.	4	11 January	Near Trevose Head.
111	Alpha - - -	Schooner	70	5	Flour - -	Total.	5	11 January	Trevethick Bay, Padstow.
121	Speculator, 3 years -	Smack	21	2	Culm - -	Total.	1	24 January	Off Lenny Head.
125	Martha, 24 years -	Smack	23	3	Coals - -	Total.	3	30 January	Listock Pier, Penarth Roads.
135	La Désirée, 6 months -	Schooner	122	8	Coals - -	Total.	1	14 March	Padstow Harbour.
137	Velox - - -	Schooner	48	4	Iron - -	Total.	3	21 March	Scilly Isles.
141	Trevaunance -	Schooner	70	4	Ore - -	Total.	1	29 March	Porthcawle.
176	Warden - - -	Barque	406	11	Iron - -	Total.	7	8 Oct. -	Braunton Sands.
180	Mary Welsh, 11 years -	Brig	116	6	Coals - -	Total.	6	18 Oct. -	Off Godrevy Rocks.
	No. of Vessels - -	20	4814	170	Total Losses - - Partial Losses - -	16 4	95		

(*b*) VESSELS IN BALLAST:

No. in Return	Name and Age (if known) of Ship.	Rig.	Tons.	Men.	Colliers in Ballast marked C, other vessels B.	Loss on Property, whether partial or total.	Lives lost.	Date of Casualty.	Place.
75	Jules, 10 months -	Ketch -	65	5	B	Total -	1	1856: 3 Oct.	Between Island of Caldy and St. Margaret's.
92	Louis Munro, 21 years	Barque -	300	13	B	Total -	9	9 Dec.	Milford Haven.
174	French Lugger -	Lugger -	70	4	B	Total -	4	1857: 7 Oct.	Burry River.
	No. of Vessels - -	3	435	22	Total Losses	- 3	14		

(*c*) VESSELS WHETHER LOADED OR IN BALLAST UNKNOWN:

No. in Return	Name and Age of Ship, when known.	Rig.	Tons.	Men.	Ballast or Cargo.	Loss on Property.	No. of Lives Lost.	Date of Casualty.	Place.
11	Bon Leon - -	Schooner	76	5	Unknown -	Total -	5	1856. 7 Feb.	Off Porthcawl.
	No. of Vessels - -	1	76	5	Total Loss	- 1	5		

TABLE 5.—Wrecks and Casualties, showing the Total Tonnage of the Vessels and the Total Number of Hands on Board: and distinguishing Loaded Vessels from Vessels in Ballast; the Number of Hands employed, and the Number of Lives Saved and Lost in each Case; and Casualties occasioning Loss of Life, from other Casualties.

—	Casualties occasioning Loss of Life.					Casualties not occasioning Loss of Life.			Total.				
	No. of Casualties.	Tonnage of Vessels.	Lives Lost.	Lives Saved.	Hands em ployed.	No. of Casualties.	Tonnage of Vessels.	Hands employed.	No. of Casualties.	Tonnage of Vessels.	Lives Lost.	Lives Saved.	Hands employed.
Loaded Vessels	21	4,890	100	75	175	147	23,993	1,131	168	28,883	100	1,206	1,306
Vessels in Ballast.	3	435	14	8	22	16	3,547	143	19	3,982	14	151	165
Total of Loaded Vessels and Vessels in Ballast.	24	5,325	114	83	197	163	27,540	1,274	187	32,865	114	1,357	1,471

TABLE 6.—PER-CENTAGES.

Description of Vessels.	Proportion per Cent. that—				
	Casualties to Vessels with **Cargo** and Vessels in **Ballast** respectively bear to the whole Number of Casualties.	Casualties occasioning **Total Losses** bear to the whole Number of Casualties.	Casualties occasioning **Partial Losses** bear to the whole Number of Casualties.	Casualties occasioning **Loss of Life** bear to the whole Number of Casualties.	**Lives Lost** bear to the whole Number of Hands employed.
Loaded Vessels	89·8	87·2	92·1	12·5	7·6
Vessels in Ballast	10·2	12·8	7·9	15·8	8·5
Loaded Vessels and Vessels in Ballast	—	46·	54·	12·8	7·75

TABLE 7.—Wrecks and Casualties, showing the Cargoes of the Ships.

Bark	1
Coals and Coke	82
Cotton	1
Culm	4
Cyder	1
General	13
Grain	11
Guano	2
Metals and Metallic Ores; chiefly Iron and Copper	32
Carried over	147
Brought over	147
Oranges	1
Potatoes	2
Salt	2
Sheep	1
Ships in Ballast	19
Stone, Limestone, Lime, and Clay	5
Sugar	1
Timber	7
Unknown	2
Total	187

TABLE 8.—Wrecks and Casualties, showing the Vessels referred to in the Return annexed, arranged according to the Rig, Tonnage, and Number of Hands on Board.

Rig.		Tonnage.		Hands.	
Barges - - -	4	60 and under -	43 vessels.	With 5 and under -	75 vessels.
Barques - -	17	100 and under -	52 „	„ 10 and under -	70 „
Brigantines - - -	10	200 and under -	42 „	„ 15 and under -	22 „
Brigs - - -	39	300 and under -	20 „	„ 20 and under -	13 „
Cutter - - -	1	400 and under -	11 „	„ 25 and under -	4 „
Galleon - - -	1	500 and under -	7 „	„ 30 and under -	0 „
Ketch - - -	1	600 and under -	2 „	„ 35 and under -	1 „
Luggers - -	3	700 and under -	5 „	„ 40 and under -	1 „
Pollacre - -	1	800 and under -	1 „	Unknown - -	1 „
Schooners - - -	67	1,500 and under -	3 „		
Ships - - -	11	Unknown - -	1 „		
Sloops - - -	7				
Smacks - - -	17				
Steam Ships - -	6				
Trow - - -	1				
Unknown - - -	1				
Total - -	187	Total -	187 „	Total -	187 „

TABLE 9.—Wrecks and Casualties, showing the Direction of the Wind at the Time each Casualty happened, and the Number of Casualties which happened in each Month, and at each Degree of Force.

Direction of Wind.

Direction of Wind.	Jan.		Feb.		March.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		Totals.		Grand Total, 1856–1857.	Direction of Wind.
	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.		
N. -	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	.	1	1	2	N.
N.N.E. -	.	1	.	.	.	.	.	.	.	.	.	.	1	.	1	1	.	.	.	.	.	1	.	.	2	3	5	N.N.E.
N.E. by N.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	N.E. by N.
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E.S.E. -	.	1	1	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	6	1	7	E.S.E.
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S.S.W. -	.	2	1	1	.	.	.	2	.	.	1	.	.	1	.	.	1	.	.	1	.	1	4	1	7	9	16	S.S.W.
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W. -	1	2	1	.	.	.	.	.	1	.	1	.	2	.	.	1	.	.	.	1	.	.	1	.	7	4	11	W.
W.N.W. -	.	3	.	.	.	1	.	1	2	1	1	.	1	1	.	.	1	.	1	1	1	.	.	.	7	8	15	W.N.W.
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N.N.W. -	.	.	.	.	.	.	.	.	.	.	1	.	2	.	1	1	.	.	.	1	.	.	.	.	4	2	6	N.N.W.
Not stated	.	.	2	.	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	3	1	4	Not stated
Calm -	.	1	1	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	2	3	5	Calm.
Variable -	.	.	.	3	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	3	5	Variable.
Total -	8	29	14	6	9	10	6	7	6	2	5	3	7	6	3	7	15	4	8	11	3	3	12	3	96	91	187	Total.

Force of Wind.

Force of Wind.	Jan.		Feb.		March.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		Total.		Grand Total, 1856–1857.	Force of Wind.
	1856.	1857.	1856.	1857	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.		
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3 - -	.	.	1	1	1	.	1	.	.	.	.	.	1	1	.	2	.	.	.	.	.	.	1	.	5	4	9	3
5 - -	1	.	.	.	.	1	.	.	1	1	.	2	1	.	1	1	.	.	1	.	2	.	.	1	7	6	13	4
4 - -	.	1	1	.	2	.	.	.	.	.	1	.	1	2	.	2	1	1	2	.	1	.	1	1	10	7	17	5
6 - -	1	2	2	.	2	1	1	.	2	.	2	.	1	.	.	.	.	2	.	2	.	.	.	.	11	7	18	6
7 - -	1	4	1	1	.	.	.	.	.	1	2	.	.	.	.	.	2	.	1	1	.	1	.	.	7	8	15	7
8 - -	3	.	1	.	1	1	1	.	1	.	.	.	.	1	.	.	.	1	1	1	.	1	.	.	8	5	13	8
9 - -	1	2	2	2	1	4	1	3	.	.	.	.	1	2	.	.	2	.	2	3	.	.	5	.	15	16	31	9
10 - -	.	5	2	.	.	.	1	1	1	.	.	.	.	.	2	.	10	.	1	4	.	.	5	.	22	10	32	10
11 - -	.	12	.	.	.	3	.	1	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	2	16	18	11
12 - -	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	2	12
Unknown	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	2	Unknown.
Total -	8	29	14	6	9	10	6	7	6	2	5	3	7	6	3	7	15	4	8	11	3	3	12	3	96	91	187	Total.

Figures to denote the Force of the Wind.

0.	Calm.		
1.	Light Airs -	Just sufficient to give steerage way.	
2.	Light Breezes -	With which a Ship with all Sail set and clean full would go in smooth water.	to 2 knots.
3.	Gentle Breeze -		to 4 „
4.	Moderate Breeze -		5 to 6 „
5.	Fresh Breeze -	In which she could just carry in chase, full and by	Royals, &c.
6.	Strong Breeze -		Single Reefs and T.G. Sails.
7.	Moderate Gale -		Double Reefs and Jib.
8.	Fresh Gale - -		Triple Reefs, &c.
9.	Strong Gale -		Close Reefs and Courses.
10.	Whole Gale -	In which she could just bear close-reefed Main Topsail and reefed Foresail.	
11.	Storm - -	Under Storm Staysail.	
12.	Hurricane - -	Under Bare Poles.	

THOᵃ GRAY.

VESSELS in DISTRESS on the EAST COAST OF ENGLAND, betw

Name of Ship. 1	Port of Registry (if British). 2	Port sailed from. 3	Date of sailing. 4	Hour of sailing. 5	Weather at Time of sailing. 6	Wind at Time of sailing. 7	Tide Stream at Time of sailing. 8	Port bound to. 9	Whether in Ballast or with Cargo. Ballast. 10	Cargo. 11	Exact Spot where Casualty happened. 12
(1) Conqueror, steam tug. Schooner—500—15. (15 years.)	Sunderland -	Sunderland -	3 Jan.	7 20 A.M.	Fine, strong sea	S.S.W. 2	¼ flood - -	- - -	Ballast	- -	Polka Hole, Sunderland Harbour.
(2) Sarah - Schooner—82—5. (31 years.)	Ipswich - -	Ipswich -	10 Dec.	9 A.M.	- - -	- -	- - -	Seaham -	Ballast	- -	Blyth - -
(3) La Parisienne - Schooner—103—7. (Age unknown.)	Dundalk -	Sunderland -	8 Jan.	- -	Heavy sea -	N.E. 8	- - -	Nantes - -	- -	Coals	Sunderland
(4) Deux Sœurs - Lug—90—6. (15 years.)	St. Valerie -	Blyth - -	9 Jan.	- -	Hazy, heavy sea	N.E. 7	High water -	Bayonne -	- -	Coals	Sand Point, W. of Blyth Haven.
(5) Innes - Schooner—81—5. (5 years.)	Arbroath -	Arbroath -	9 Jan.	- -	Variable -	N. to E.	- - -	Sunderland -	Ballast	- -	Sunderland
(6) Mary - Smack—19—2. (14 years.)	Berwick -	Shields - -	10 Jan.	- -	Snow showers	N. 5 & 6.	Running S. High water about 4 30 P.M.	Grimsby -	- -	Coals	16 miles S. of Whitby
(7) Storm King - Bark—300—12. (15 years.)	Shields -	Shields -	- -	- -	- - -	- -	- - -	Constantinople	- -	Coals	Off Flamborough Head
(8) Tyne - - Brig—86—5. (30 years.)	N. Yarmouth	Middlesbrough	- -	3 P.M.	- - -	W.S.W.	- - -	Southwold -	- -	Coals	2 miles S. of Scarborough Nab.
(9) General Murray - Brig—140—7. (Age unknown.)	Ramsgate -	Shields - -	16 Jan.	- -	Stormy - -	S.E. 10	- - -	London -	- -	Coals	Flamborough Head W. by S. 15 miles.
(10) Thomas and Elizabeth. Galiot—56—4. (13 years.)	London -	Seaham -	21 Jan.	- -	- - -	- -	- - -	Fosdyke -	- -	Coals	Off Flamborough Head.
(11) Atalanta - Barque—270—11. (Age unknown.)	Osternssor -	Hartlepool -	26 Jan.	- -	Moderate -	S.W.	High water -	Sandscrona -	- -	Coals	Hartlepool
(12) Josephine - Schooner—99—6. (4 years.)	Cherbourg -	Hartlepool -	- -	- -	- - -	- -	- - -	Charante -	- -	Coals	Whitby
(13) Kingston - Barque—279—8. (Age unknown.)	Sunderland -	Moored in River.	- -	- -	Bad - -	W.N.W. 11	High water -	- - -	- -	- -	Ravens' Wharf in Wear.
(14) Tower - - Schooner—174—7. (Age unknown).	Sunderland -	Shields -	5 Feb.	2 P.M.	- - -	W.S.W. moderate.	¾ flood -	Carthagena -	- -	Coke	Off Sunderland
(15) Teresa - - Brig—182—7. (20 years.)	Sunderland -	Sunderland -	5 Feb.	5 P.M.	Fine - -	Moderate breeze W.	High water -	London -	- -	Coals	30 miles E. of Tynemouth Light.
(16) George Glen - Brig—300—11. (Age unknown.)	London -	Sunderland -	6 Feb.	4 P.M.	Fresh breezes. Hazy.	- -	- - -	London -	- -	Coals	Between Sunderland and Scarborough.
(17) Onderneming - Galiot—116—7. (25 years.)	Amsterdam -	Amsterdam -	4 Feb.	- -	Moderate -	S.S.W.	- - -	Newcastle -	Ballast	- -	Abandoned 6 miles from coast, Whitby bearing W.N.W.
(18) Amity - - Brig—220—9. (Age unknown.)	S. Shields -	Seaham -	6 Feb.	3 P.M.	- - -	S.S.W. fresh breeze.	- - -	London -	- -	Coals	8 miles N.E. of Whitby.
(19) Maria - - Sloop—40—3. (Age unknown,)	Rye - -	Rye - -	4 Feb.	11 A.M.	Fine - -	Light breezes S.	High water -	Sunderland -	- -	Oak	Robin Hood's Bay.
(20) Yorkshire - Brig—315—18. (Age unknown.)	Stockton -	W. Hartlepool	3 Feb.	2 P.M.	- - -	W.S.W. 5	Near high water.	Havre-de-Grace.	- -	Coals	Scarborough W. by N. miles.
(21) Harry King - Brig—115—8. (20 years.)	Hastings -	Rye - -	4 Feb.	- -	Fine - -	W.N.W.	Flood - -	Hartlepool -	Ballast	- -	20 miles E. of Sunderland.
(22) Margaret - Schooner—72—5. (10 years.)	Grangemouth	Berwick -	5 Feb.	- -	- - -	- -	- - -	Coal Port -	Ballast	- -	Sea. E. Coast.

r ISLANDS and FLAMBOROUGH HEAD, in 1856.

Weather at Time of Casualty. 15	Wind at Time of Casualty. 16	Tide at Time of Casualty. 17	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18	Lives lost. 19	Circumstances which caused the Casualty. 20	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21	State any Particulars that can throw light on the Cause of the Casualty. 22	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23
Fine, strong sea	S.S.W. 2	¼ flood	Stranded; total	Nil.	Struck on sunken wreck and knocked a hole in her bottom. Towed a little further up the harbour, and became a total wreck from heavy sea.	No	The sunken wreck was buoyed, but had washed away from the buoy about 100 yards.	No. O.
Stormy	S.S.E. 10	¾ flood to southward.	Stranded; got off	Nil.	In running into Blyth for shelter struck by sea. Struck ground and lost rudder Drove on Sow and Pigs Reef near the breakwater.	No; but driven N. of her port.	Gale caught her off Scarborough. Struck on the bar and became unmanageable, the rudder being unshipped.	Yes; at any place between Scarborough and Blyth would have prevented the accident. C. C.
Heavy sea	N.E.	1 hour ebb	Struck pier; got off	Nil.	Steam-tug not powerful enough; cast her off. Fell to leeward and struck the pier. Towed back to moorings by two steam-tugs.	No.	—	—
Hazy, heavy sea.	N.E. 7	High water	Stranded; got off	Nil.	Whilst towing out of harbour took a sheer to W. and caught the ground.	No.	—	—
Snow; squally	E.N.E. 9	Half ebb	Stranded; got off	Nil.	Stress of weather. Driven behind S. Pier.	No	When taking the harbour of Sunderland a heavy sea struck the vessel; she became unmanageable, took the ground, and was driven behind S. pier.	No; the vessel was bound to Sunderland, and would not have taken another port. C. C.
Snow showers	N. 8	¾ flood	Abandoned; total	Nil.	Sounded pumps; found water gaining and abandoned her. Pump spur broken.	No	Leaky, with pump out of order; the only cause. Had reached S. on her voyage about 42 miles.	No. M.
Heavy	Variable 7	- -	Dismasted in a gale; partial.	Nil.	Stress of weather	Yes	- - - -	Put into Leith.
Very thick	S.S.W. 6	Half ebb	Stranded; total	Nil.	Not heaving lead in thick weather.	No.	—	—
Thick	E.N.E 4	Slack water	Foundered; total	Nil.	Starting a butt, or knocking against floating wreck.	No	Vessel old. Too much strain upon her, caused by being under double-reefed topsails.	Yes; Filey. C. C.
Gale	S.S.E. 11	- -	Loss of sails, &c.; partial.	Nil.	Stress of weather, strained very badly and lost sails, tore away rudder and started seams.	No	- - - -	No. M.
Moderate	S.W.	High water	Stranded; got off	Nil.	In going out of the harbour struck the piers.	No	- - - -	No.
Hazy	N.W. 4	Low water	Stranded; got off	Nil.	Was running with studding sails set, in thick weather. No lead going.	No	- - - -	No.
Bad	W.N.W. 11	High water	Capsized; recovered	Nil.	Heavy gale, broke from her moorings.	No	Took the ground on a bank, and as the tide receded, fell over.	No. O.
Stormy	W. by N. 11	About low water.	Leaky; partial	Nil.	Struck by a sea, which caused her to leak.	Yes; driven as far N. as the Coquet Island, not having at any time previous reached farther S. than Sunderland.	The vessel was struck by the seas, and rendered leaky.	Yes; Sunderland. O.
Stormy	S.W. 10	¼ flood in shore.	Foundered; total	Nil.	Bad weather, seas carrying away stanchions and covering boards, pumps could not keep the leak under.	Yes; got as far to the S. as Hartlepool, and was driven back to about 3 miles E. of Tynemouth Light.	Stress of weather, and being struck by several seas.	Perhaps Sunderland. O.
Violent westerly gale.	S.W. 10	- -	Foundered; total.	Nil.	Caught in a gale; abandoned in a sinking state.	No	Driven 60 miles off coast day of sailing; thrown on her beam ends and foundered.	No. O.
- -	S.W. 10	- -	Abandoned; total	Nil.	Whole gale.	—	—	—
- -	W.N.W. 10	- -	Stranded; got off	Nil.	Caught in a gale; decks swept.	—	—	Towed into Scarborough.
Hurricane from shore.	Blowing	Low water	*Abandoned; total	Nil.	Anchored in a hurricane, drove from anchors, dismasted and abandoned.	No	Becoming dismasted	No. C. C.
Gale	W.S.W.	½ flood	Stranded; got off	Nil.	Caught in a gale; leaky.	No.	—	—
Cloudy	W.N.W. 6.	- -	*Abandoned; total	Nil.	Stress of weather	No	Sprung a leak, and shifted ballast.	No. O.
- -	N.W. 12	- -	Foundered; total		Stress of weather; left Berwick, and never heard of since 6th.	No	Vessel being in ballast, supposed to have been upset by strong gales.	No. O.

* These vessels were subsequently picked up derelict, and repaired.

Vessels in Distress on the EAST COAST of ENGLAND, betw

Name of Ship. 1	Port of Registry, (if British). 2	Port sailed from. 3	Date of sailing. 4	Hour of sailing. 5	Weather at Time of sailing. 6	Wind at Time of sailing. 7	Tide Stream at Time of sailing. 8	Port bound to. 9	Whether in Ballast or with Cargo. Ballast. 10	Whether in Ballast or with Cargo. Cargo. 11	Exact Spot where Casualty happened. 12
(23) Mary Jane - Brig—132—7. (12 years.)	Dartmouth -	London -	2 Feb.	Between 7 & 8 A.M.	Clear - -	W.N.W. 4.	½ an hour before high water.	Hartlepool -	Ballast	- -	Off Scarborough
(24) Sultan - - Brig—249—11. (19 years.)	Shields - -	Folkestone -	- -	- -	- - -	- -	- - -	Shields - -	Ballast	- -	Off Shields -
(25) Matilda - - Brig—79—4. (38 years.)	Lowestoft -	Grimsby -	5 Feb.	4 P.M.	Fine - -	W.S.W. 5.	Nearly high water.	Shields - -	- -	Salt	Upper mooring buoy, S. Shields.
(26) Reine - - Schooner—74—6. (Age unknown.)	Belgium -	- - -	- -	- -	- - -	- -	- - -	- - -	- -	- -	20 miles N.E. of Flamborough Head.
(27) New Union - Schooner—162—7. (9 years.)	London -	Seaham -	11 Feb.	- -	Rather foggy -	E.N.E.; light.	High water -	London -	- -	Coals	Marske Beach, Yorkshire.
(28) John - - Barque—273—10. (31 years.)	Sunderland -	Sunderland -	9 Feb.	7 P.M.	Variable -	S.; light	4 hours flood -	Gibraltar -	- -	Coals	Hole Wyke near Staithes.
(29) Friendship - Schooner—65—4. (Age unknown.)	Sunderland -	Newcastle -	- -	- -	- - -	- -	- - -	Aberdeen -	- -	Iron.	Off Farn Islands.
(30) Jane - - Brigantine—169—8. (14 years.)	Maldon -	London -	11 Feb.	8 A.M.	S.W.; fine -	Breeze	¼ flood - -	Shields -	Ballast	- -	Herd Sand -
(31) Ramsgate - - Sloop—43—3. (Age unknown.)	Boston -	Newcastle -	- -	- -	- - -	- -	- - -	London -	- -	Bricks	9 miles N.E. of Bridlington.
(32) Croxdale - - Brig—294—9. (Age unknown.)	Hartlepool -	Middlesbrough	23 Feb.	5½ P.M.	Strong swell -	N.E.	High water -	Genoa -	- -	Iron	Tees Bar -
(33) Louise - - Brig—103—7. (5 years.)	Dieppe - -	Newcastle -	- -	- -	- - -	- -	- - -	Dieppe - -	- -	Coals	Newcastle -
(34) Canada - - Brig—260—8. (Age unknown.)	London -	London -	- -	- -	- - -	- -	- - -	Sunderland -	Ballast	- -	Sunderland Harbour.
(35) Alfred - - Barque—288—10. (19 years.)	Hamburgh -	Hamburgh -	13 Mar.	- -	Moderate -	E.; fresh breeze.	- - -	Hartlepool -	Ballast	- -	40 yards N.E. of W. Hartlepool Pier
(36) Charles Molloy - Brig—191—10. (12 years.)	London -	London -	- -	- -	- - -	- -	- - -	Hartlepool -	Ballast	- -	Hartlepool Heugh.
(37) Shamrock - Brig—91—5. (Age unknown.)	Whitstable -	Whitstable -	17 Mar.	9 A.M.	Thick - -	S.E.: moderate.	- - -	Coal Port -	Ballast	- -	Crook Point, miles N. of Scarborough Creek.
(38) Mary - - Brig—149—6. (8½ years.)	Whitby -	London -	- -	- -	- - -	- -	- - -	Seaham -	Ballast	- -	S. pier, Sunderland.
(39) James - - Brig—191—7. (12 years.)	London -	London -	16 Mar.	Unknown	Unknown -	E.	Ebb - -	Seaham -	Ballast	- -	Sunderland Bar
(40) Quayside - - Brig—234—10. (Age unknown.)	Newcastle -	Janon - -	24 Mar.	- -	- - -	- -	- - -	Sunderland -	- -	Coals	Shields Bar
(41) Jessy - - Schooner—220—7. (Age unknown.)	Exeter -	Middlesbrough	- -	- -	Moderate -	N.E.	- - -	Torquay -	- -	Coals	Stranded in Tees.
(42) Essex - - Brig—180—7. (19 years.)	Sunderland -	Sunderland -	5 April	3 P.M.	Clear and fine	S.S.E.; strong.	A little after high water.	Hamburgh -	- -	Coals	Behind N. harbour, Sunderland.
(43) Harlington - Brig—255—9. (5 years.)	Sunderland -	Sunderland -	5 April	4 P.M.	Clear - -	S.S.E. 6	High water -	Constantinople	- -	Coals	Sunderland Bar
(44) William - - Coble—20—6. (Age unknown.)	Sunderland -	Sunderland -	- -	- -	- - -	-	- - -	Vessels in offing.	Ballast	- -	S. dock outlet, Sunderland.
(45) Robert Stride - Brig—235—9. (16 years.)	Sunderland -	Seaham -	18 April	1 A.M.	Clear - -	E.N.E. 5	Running S.; high water at 4 A.M.	London -	- -	Coals	Seaham Harbour.
(46) Eugenie - - Schooner—150—5. (14 years.)	Calais - -	Blyth - -	- -	- -	- - -	- -	- - -	Bordeaux -	- -	Coals	15 miles from Whitby.
(47) William and Isabella. Brig—182—7. (16 years.)	Whitby -	London -	24 April	4 A.M.	- - -	E.S.E.	- - -	Hartlepool -	Ballast	- -	Sands 1 mile E. of Seaton Carew.
(48) Doctor Daniel - Brig—194—8. (15 years.)	Cuxhaven -	Hamburgh -	- -	- -	- - -	- -	- - -	Hartlepool -	Ballast	- -	Rocks between new and old piers, Sunderland.

slands and Flamborough Head, in 1856—*continued.*

Weather at Time of Casualty. 15	Wind at Time of Casualty. 16	Tide at Time of Casualty. 17	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18	Lives lost. 19	Circumstances which caused the Casualty. 20	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21	State any Particulars that can throw light on the Cause of the Casualty. 22	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23
Clear - -	W. 11	- - -	Dismasted; partial -	Nil.	Stress of weather; dismasted and thrown on beam ends by heavy squall.	No - -	- - - -	No; towed into Grimsby to repair.
- - -	W.S.W. 9.	- - -	Abandoned; total -	Nil.	Heavy gale.	—	—	—
Cloudy; heavy rains.	S.S.W. to W. 12.	¼ flood -	Stranded; got off -	Nil.	Driven from moorings by gale.	No - -	Breaking adrift from moorings, with some hundred, during a hurricane.	No. C.C.
- - -	- -	- - -	Foundered; total.	—	—	—	—	—
Misty - -	S.E. by E. 3.	¼ flood -	Stranded; got off -	Nil.	Main halyards giving way; too close to land; no lead hove.	No - -	From master hugging the shore.	No; refuge harbours are very necessary on the E. coast. O.
Thick; rainy	S. 6	Nearly high water.	Stranded; got off -	Nil.	Error in judgment -	No - -	Stranding in thick weather	No. O.
- - -	- -	- - -	Abandoned; total -	Nil.	Leak, which could not be reduced.	—	—	—
Clear - -	S.W. 4	½ flood -	Stranded; got off -	Nil.	Pilot taking bar too soon.	No - -	When vessel struck, unshipped her rudder, and she became unmanageable.	No. M. and O.
Hazy - -	N.N.E. 6	- - -	Foundered; total -	Nil.	Sprung a leak; could not be kept under.	—	—	—
Fine weather	N.E. 3	High water -	Stranded; partial -	Nil.	Struck on bar whilst being towed out; heavy swell.	- - -	Not having been kept in mid-channel, and a heavy swell on.	No. C. C.
Fine - -	- -	- - -	Explosion - -	Nil.	Gas generated from coal under hatches.	No - -	- - - -	No.
Fine - -	N.N.W. 4.	High water -	Struck on her anchor -	Nil.	- - - -	No - -	- - - -	No.
Cloudy -	S.E. 7	- - -	Stranded; total -	Nil.	When at sea had had bad weather; was half full of water. When running into Hartlepool ballast shifted and vessel struck.	—	—	—
Cloudy -	S. by E. 4.	- - -	Stranded; total -	Nil.	Lost steerage and struck on rocks.	—	—	—
Hazy - -	S.E. 1	- - -	Stranded; total -	Nil.	Stress of weather; too near shore through not heaving lead.	—	—	—
Cloudy -	E.S.E.	High water -	Struck pier. Got off -	Nil.	Lost steerage way when near Seaham; driven back, and struck on South Piers.	No - -	- - - -	No. M. or O.
Clear - -	S.S.E.	- - -	Stranded - -	Nil.	Struck on Sunderland Bar.	Cannot be ascertained.		—
- - -	N.E.	- - -	Stranded - -	Nil.	Became leaky, and stranded on bar when putting back.	—	—	—
Fine - -	S.S.E. 5	- - -	Stranded; got off -	Nil.	A man fell overboard whilst vessel was in tow; vessel stopped and anchored to get him up; weighed again before tow line was made fast, and drifted on the sand and filled.	—	—	—
Clear - -	S.S.E. 6	High water	Struck pier; total -	Nil.	Tug unable to tow her for want of power. Heavy sea struck her against pier.	No - -	- - - -	No. O.
Clear - -	S.S.E. 6	High water -	Struck bar; got off -	Nil.	Being towed out, struck and damaged.	No; but had proceeded as far as off the Tees and returned leaky.	Struck the bar, and returned leaky.	No. O.
Stormy -	S.E. 6	½ ebb - -	Swamped; total -	1	Struck by heavy sea and went down.	No.	—	—
Cloudy -	E.N.E. 5	1 hour before high water.	Stranded; got off -	Nil.	Tow rope broke -	No - -	Breaking tow rope the only cause. The vessel, when the tow rope broke, had barely cleared the entrance to the harbour; immediately after breaking rope she went on at back of S. pier at S. harbour.	No. O.
Dark - -	N.E. 6	- - -	Foundered; total -	4	Sprung a leak.	—	—	—
Thick, squally	E.S.E. 7	- - -	Stranded; total -	Nil.	Thick weather - -	No - - -	- 1 - -	Passed Whitby in the afternoon of the 29th and the master states he would have taken the harbour had it been accessible. M.
Squally, thick	E.N.E. 6	High water -	Stranded; got off -	Nil.	Thick weather; mistook new for old pier.	—	—	—

Vessels in Distress on the EAST COAST ENGLAND, betwe

Name of Ship.	Port of Registry (if British).	Port sailed from.	Date of sailing.	Hour of sailing.	Weather at Time of sailing.	Wind at Time of sailing.	Tide Stream at Time of sailing.	Port bound to.	Whether in Ballast or with Cargo.		Exact Spot where Casualty happened.
									Ballast.	Cargo.	
1	2	3	4	5	6	7	8	9	10	11	12
(49) Admiral Hood Schooner—155—6. (10 years.)	Lynn	Lynn	6 May	7 30 A.M.	Fine	E.S.E. 5	Flood	Seaham	Ballast	-	Entrance of Seaham Harbour.
(50) Samson Ketch—93—5. (4 years.)	Cowes	Cowes	2 May	4 30 P.M.	Fine	W., light breeze.	Tide flowing	Sunderland	Ballast	-	6 miles from Flamborough Head.
(51) Fair Maid Schooner—107—5. (22 years.)	Dundee	Dundee	26 May	7 A.M.	Thick	S.E. 5	Ebb	Seaham	Ballast	-	S. side of entrance to Seaham Harbour
(52) Emma Sloop—24—2. (Unknown.)	S. Shields	Whitby	27 June	9 A.M.	-	W.	-	Middlesbrough	-	Stone	Saltburn near Redcar.
(53) Spring Barque—231—8. (Age unknown)	N. Shields	London	4 July	-	-	-	Last quarter ebb.	Shields	Ballast	-	Rocks off Shields.
(54) Ford Brig—210—8. (25 years.)	Sunderland	Sunderland	7 July	7 P.M.	Fine	W.N.W. Fresh.	High water	London	-	Coals	6 miles off Tees.
(55) Peace Brig—166—6. (32 years.)	Whitby	London	-	-	Fine	S. moderate.	-	Newcastle	Ballast	-	Skinning Grove near Whitby.
(56) Brothers Coble—7—3. (Age unknown.)	Redcar	Redcar	8 July	12 40 A.M.	-	W.S.W.; light breeze.	¾ ebb	Fishing	-	Fish	Off Redcar
(57) Newport Schooner—73—5. (19 years.)	Montrose	Sunderland	18 July	2 A.M.	Fine	S.W. 4	¾ flood	Montrose	-	Coals	Bondicar Bush S. of Coquet Island.
(58) Perseverance Schooner—34—3. (50 years.)	Wells	Shields	31 July	3 P.M.	Fine	S.S.E.	Flood	Caen	-	Coals	10 miles off Filey, W.S.W
(59) Impetuous Brig—174—8. (1 year.)	Rye	Rochester	7 Aug.	2 P.M.	Fine; gentle breeze.	S.S.W.	3 hours' flood	Shields	Ballast	-	Steel Point, Flamborough Head.
(60) St. Louis Lugger—60—25. (Age unknown.)	Fecamp	-	-	-	-	-	-	Fishing	-	Nets	Steel Point, Flamborough Head.
(61) Arthur Eugenie Schooner—75—5. New.	Cherbourg	Seaham	-	-	-	-	-	Cherbourg	-	Coals	9 miles from Hartlepool.
(62) Mersey Schooner—64—4. (38 years.)	Montrose	Grangemouth	21 Aug.	6 A.M.	-	E.; blowing strong.	Flood	Dunkirk	-	Iron	4 miles E. by S. of Filey
(63) Star Steam Tug—20—4. (4 years.)	Stockton	Scarborough	29 Aug.	7 P.M.	Fine	S.W. 2; light.	2 hours' ebb	Middlesbrough	Ballast	-	Rocks off Redcar.
(64) British Dominion, steam tug. 27—3. (Age unknown.)	Shields	Shields	-	-	Light wind at W.		½ ebb	Hauxley	-	Herrings	Hauxley Harbour, on a rock 500 yards from high-water mark.
(65) Ann Sloop—15—2. (Age unknown.)	Whitby	Hartlepool	-	-	-	-	-	Staithes	-	Coals	S. of E. pier, Whitby.
(66) Alexander Brig—212—8. (15 years.)	Whitby	Hartlepool	18 Sept.	-	Moderate	Westerly, Fresh.	Flood	Gottenburgh	-	Coals	Lat. 55° N. Long. 1° E.
(67) John Brig—163—6. (51 years.)	Shields	Shields	19 Sept.	7 P.M.	Moderate	N.	-	London	-	Coals	6 miles off Robin Hood's Bay.
(68) Medora Schooner—114—5. (20 years.)	Yarmouth	Yarmouth	22 Sept.	-	-	-	-	Shields	Ballast	-	Whitburn Steel.
(69) Milton Schooner—94—5. (35 years.)	Yarmouth	Yarmouth	24 Sept.	7 A.M.	-	S.	-	Middlesbrough	Ballast	-	Tees Mouth, 1 mile S. of Seaton Carew.
(70) Magdelena Sloop—45—5. (7 years.)	Ystadt	Ystadt	-	-	-	-	-	Newcastle	-	Wheat	Behind S. Pier, Sunderland.

Islands and Flamborough Head, in 1856—*continued.*

Weather at Time of Casualty. 15	Wind at Time of Casualty. 16	Tide at Time of Casualty. 17	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18	Lives lost. 19	Circumstances which caused the Casualty. 20	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21	State any Particulars that can throw light on the Cause of the Casualty. 22	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23
Cloudy	E.N.E. 6	¼ flood	Struck pier; got off	Nil.	When entering harbour, struck by heavy sea, and went to leeward.	No	- - - -	No. M.
Clear	E. 8	Spring tide, nearly high water.	Dismasted; partial	Nil.	Stress of weather	Driven back from Flamborough Head about 14 miles; taken in tow by steamer to Lowestoft.	Heaviness of the gale only.	Yes. "If a refuge harbour at Bridlington or Filey, I could have run for it, and saved the hire of steamer." M.
Cloudy	E.N.E. 4	1st quarter ebb	Struck pier; got off	Nil.	When near entrance, Wind fell away; heavy swell threw vessel against pier.	No	Falling away of wind, and heavy sea.	No.
Clear	N.N.W. 4	¼ ebb	Leaky; total	Nil.	Sprung a leak in heavy sea; ran ashore to save her.	—	—	—
Stormy	N.E. 12	Nearly high water.	Stranded; got off	Nil.	Heavy gale from N.E.; ran ashore to save her.	No	At anchor off her port, waiting tide, when gale of wind and high sea from N.E. drove her into shoal water, where she slipped and ran for beach.	Yes. An improved state of entrance to Shields harbour would probably have prevented the occurrence. R.W.
Hazy	N.E., sudden squall.	¼ flood	Dismasted; partial	Nil.	Sudden squall	No	Nothing but sudden squall; vessel was assisted into Bridlington.	Yes. Harbour of refuge at Redcar might probably have been taken advantage of; but Bridlington Bay was of itself sufficient refuge. O.
Rainy	N.N.E. 9	1 hour ebb	Stranded; got off	Nil.	Stress of weather	No	- - - -	No; but it is stated by agent that vessel was off Whitby on preceding night when it was blowing hard, and would most certainly have come in had harbour been accessible.
Rain	N.N.E. 9. Heavy gale.	¼ flood	Capsized; total	1	Heavy gale	No	First struck with a sea, and afterwards upset.	No. R.W.
Thick	N.N.W. Moderate.	Low water	Stranded; got off	Nil.	Thick weather	No	Hazy weather; vessel run aground.	No. C. C.
Fine	N.N.E. 2	Low water	Foundered; total	Nil.	Sprung a leak	No	The vessel was very old; supposed hoveing forward gave way, and only one pump, which was choked.	No. M.
Thick fog	E.S.E. 2	¼ flood	Stranded; got off	Nil.	Fog	No	Binnacle compass being in bad order card got wet and stuck to the glass.	No. C.C.
Fog	E.S.E. 2	¼ flood	Stranded; got off	Nil.	Following a brig; want of caution.	No	—	—
Showers	W. 6	- - -	Capsized; total	Nil.	Capsized by squall.	No	—	—
Fine	S.S.W. 6	High water	Foundered; total	Nil.	Strong wind and heavy sea strained ship.	- - - -	Not seaworthy	Yes. Had there been a deep water harbour in Tees Bay or Whitby ship could have been saved. O.
Hazy	S.W. 2	¼ flood	Stranded; got off	Nil.	Fog, and neglect of lead	No	Out of course through negligence and want of sobriety.	No. R.W.
Very hazy	S.S.W. 2	High water	Struck on rocks; total	Nil.	Hazy weather; want of caution.	No	Entering her port of destination; unacquainted with the harbour.	No. M.
Fine; clear	N.N.W. 5	¼ flood	Struck pier head; total	1	Running for harbour	No	The tow rope to the tug steamer broke; vessel struck pier; canted seaward and sunk.	Yes; Whitby. M. or O.
Showery	N.N.E. 9	Too far from land to feel the tide.	Leaky and disabled; partial.	Nil.	Struck by heavy sea	Yes; ran back 160 miles to Grimsby. Had reached 100 miles E. on her voyage.	Was struck by a heavy sea.	Yes. Whitby would have been most convenient; as she could not reach one further N., as wind was N.E. M. or O.
Clear	N. 6	Low water	Dismasted; partial	Nil.	Stress of weather; struck by heavy sea.	—	—	—
Hazy	W. 3	¼ flood	Stranded; got off	Nil.	Hazy weather; lead not hove.	No	None; but through carelessness of the master.	No. C.C.
Thick	E.S.E. 6	Flood tide	Stranded; total	Nil.	Driven on shore to leeward of 3rd buoy, through a brig getting to windward and taking wind out of sails.	No	None	No. C.C.
Boisterous	E. 3	¼ ebb	Struck pier; total	Nil.	In running for the harbour for safety, gaff broke; tide carried vessel out; struck behind S. pier.	—	—	—

Vessels in Distress on the EAST COAST of ENGLAND,

Name of Ship. 1	Port of Registry (if British). 2	Port sailed from. 3	Date of sailing. 4	Hour of sailing. 5	Weather at Time of sailing. 6	Wind at Time of sailing. 7	Tide Stream at Time of sailing. 8	Port bound to. 9	Whether in Ballast or with Cargo. Ballast. 10	Cargo. 11	Exact Spot where Casualty happened. 12
(71) Nymph Sloop—59—4. (Age unknown.)	Arbroath	London	-	-	-	-	-	Arbroath	-	Lime	Shields Har- bour.
(72) Thomas Brig—145—7. (28 years.)	Newcastle	Brake	-	Unknown	Unknown	Unknown	Unknown	Amble	Ballast	-	N. pier Warkworth Harbour.
(73) William Sloop—23—2. (22 years.)	Stockton	Staithes	14 Oct.	3 P.M.	-	E. 5	¼ flood	Hartlepool	Ballast	-	Rocks E. new pier, Hartlepool.
(74) Brack Snow—217—9. (32 years).	Shields	Shields	-	-	-	-	-	Hamburgh	-	Coals	Struck on sunken wreck near Bran Reef.
(75) Hendon Brig—203—8. (6 years.)	Sunderland	London	24 Oct.	12 P.M.	Fine 5	E.N.E., Fresh.	1 hour of ebb tide.	Sunderland	-	General	Redcar light
(76) Astrea Brig—85—8. (30 years.)	Whitby	London	2 Nov.	-	-	-	-	Whitby	-	General	¼ mile Filey coast guard
(77) Liberty Brig—233—9. (70 years.)	Sunderland	Sunderland	13 Nov.	3 P.M.	Fine	N.W. strong.	High water	Hamburgh	-	Coals	60 miles by E. derland.
(78) Cairngorm Schooner—95—5. (9 years.)	Dundee	Dundee	13 Nov.	3 P.M.	Moderate	N.N.W. 4	Ebb	Seaham	Ballast	-	1 mile Seaton Carew
(79) Elizabeth Brig—74—4. (44 years.)	Sunderland	Methill	-	-	-	-	-	London	-	Coals	2 miles Scarborough
(80) Pekin Barque—504—17. (15 years.)	Newcastle	Newcastle	15 Nov.	-	Squally	N.N.E.	Flood	Carthagena	-	Coke	Herd Sand
(81) Clyde Brig—158—7. (40 years.)	Sunderland	Sunderland	15 Nov.	4 30 P.M.	Clear	N.E. 6	High water	London	-	Coals	Behind the pier, Sunder- land.
(82) Robert and Mary Brig—207—8. (16 years.)	Sunderland	Sunderland	15 Nov.	5 P.M.	Fine	N.E. strong breeze.	High water	London	-	Coals	Against S. pier, Sunderland.
(83) Lybia Brigantine—111—5. (13 years.)	King's Lynn	Seaham	17 Nov.	7 30 A.M.	Hazy	W.S.W. light.	Flood	Lynn	-	Coals	5 miles from Scarborough.
(84) Brothers Brig—92—5. (Age unknown.)	Aberdeen	Sunderland	21 Nov.	-	Strong gale	E. wind, with Snow.	-	Aberdeen	-	Coals	Herd Sand
(85) Nymph Schooner—87—6. (38 years.)	Teignmouth	Southampton	3 Nov.	-	-	-	-	Sunderland	Ballast	-	Behind Sun- derland south pier.
(86) Elizabeth Brig—189—9. (2 years.)	Liverpool	Riga	-	-	-	-	-	Belfast	-	Timber	Off the Farn Islands.
(87) Albion Brig—266—10. (30 years.)	Newcastle	Dundee	29 Nov.	-	-	-	-	Shields	Ballast	-	Herd Sand
(88) Fire Fly S.S.—404—15. (2 years.)	London	London	29 Nov.	2 A.M.	Not known	Not known	Ebb	Shields	Ballast	-	2 miles S.S.E. of Sunder- land; towed by 2 tugs to- wards Shields but sunk at the Narrows off Shields.
(89) Ivy Brig—199—8. (19 years.)	Scarborough	Scarborough	4 Dec.	11 A.M.	Very thick	W.N.W.	¼ ebb	Newcastle	Ballast	-	Redcliff, miles S. of Scarborough.
(90) Earl of Leicester (Brig—147—8.) (17 years.)	London	London	28 Nov.	2 P.M.	Light	W. by W.	Ebb	Hartlepool	Ballast	-	Steel Point, Flamborough Head.
(91) Elizabeth and Mary. Schooner—65—4. (32 years.)	Yarmouth	Yarmouth	Unknown	Unknown	Unknown	Unknown	Unknown	Newcastle	-	Wheat	3 miles S. of Seaham.

Islands and Flamborough Head, in 1856—*continued.*

Weather at Time of Casualty. 15	Wind at Time of Casualty. 16	Tide at Time of Casualty. 17	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18	Lives lost. 19	Circumstances which caused the Casualty. 20	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21	State any Particulars that can throw light on the Cause of the Casualty. 22	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessels? 23
Moderate	S.E.	- - -	Cargo heated; scuttled to save her; partial.	Nil.	Cargo getting wet	No.	—	—
Dark	N.N.E. moderate.	¼ ebb	Stranded; total	Nil.	Captain mistaking lights	- - -	Owing to captain improperly running for the harbour at night without pilot.	No.
Hazy	S.S.E. 6	¼ ebb	Stranded; got off	Nil.	Lost sight of lights; tide set vessel on shore.	No	Hazy weather, accompanied by heavy sea.	Yes. Had there been a refuge harbour in Tees Bay, the vessel would in all probability have been saved. R.W.
Hazy	S.S.E. 9	¼ ebb	Stranded; total	Nil.	Lead not hove; ship out of her course.	No.	—	—
Foggy	W. to S.W. 6	1 hour ebb	Stranded; got off	Nil.	Thick weather; mistaking furnace lights for lights at S. side of Tees.	No	Nothing else than thick weather causing the lights to be mistaken.	No. A harbour of refuge would have been of no use in this case; the vessel proceeded to Sunderland with extra assistance. M.
Squally	E.N.E. 10	½ flood	Stranded; got off	Nil.	Stress of weather. Brought up in Filey Bay for shelter; cables parted.	No	Want of an accessible harbour.	Yes. Filey. M. or O.
Squally	E.N.E. 10	- - -	Leaky and dismasted; partial.	Nil.	Shipping seas, &c., stress of weather.	No	Nothing but the squall	No. Got into Bridlington. O.
Clear	E.N.E. 7	Low water	Stranded; got off	Nil.	Driven from anchor in Hartlepool Roads.	No	Stormy weather	Had there been a harbour of refuge at Coquet Island, this vessel would have been run in there instead of going to Hartlepool Roads. M.
Strong gale	N.N.E. 9	Flood	Stranded; total	Nil.	Came ashore two miles S. of Scarborough, through loss of rudder head by violence of the gale.	- - -	Come ashore on the rocks two miles S. of Scarborough, and became a total wreck, and strewed about the the coast.	—
Gloomy	N. 5.	- - -	Stranded; total	Nil.	Going out, tow rope broke, sail not set.	—	—	No. O.
Clear	N.E. 6 6	High water	Struck bar; total	Nil.	Struck bar when being towed out; became leaky; tow rope slipped off steam tug's hook; and in trying to get back into the harbour without use of tug went on shore behind S. pier.	No	Nothing more than already stated.	No. O.
Clear	N.E. 6	High water	Stranded; got off	Nil.	Squall when leaving port.	No	Struck pier, and in being turned to bring her back she went on the beach.	If Sunderland harbour had been a harbour of refuge, the ship would have sustained no further injury than that arising from striking the pier. O.
Hazy	W. moderate	Ebb	Foundered; total	Nil.	Leak commenced on leaving Seaham, and increased rapidly.	No	Iron vessel; rivet or plate supposed to have started.	No. Wind W. to W. by N. blowing hard. M.
Snow	N.N.E. 11	- - -	Stranded; got off	Nil.	No pilot or tug to be got; stranded in heavy gale; stress of weather.	Yes. The owner thinks the vessel was as far as Fern Island.	State of weather entirely.	The vessel in taking the harbour of Shields got aground. Had it been a harbour of easy access, the accident might not have occurred. O.
Snow	W.S.W. 7.	Last quarter, ebb.	Stranded; got off	Nil.	Tow rope broke when on the bar.	No	- - - -	No. O.
Snow and hail	N. 9	- - -	Leaky; partial	Nil.	Stress of weather; sprung a leak.	No; but driven out of her course.	—	Bore up for the Humber to discharge and repair
Snow	W. 5	¾ flood	Struck; partial	Nil.	Took the bar too far to south, and did not let out anchor in time to save her.	—	—	—
Fog	N.W. 7	Low water	Stranded; got off	Nil.	Took the ground in a fog; no lead going.	Not driven back	The coast being covered with snow, &c. concealing land, though clear to seaward, caused her to get aground.	Shields best situate for a refuge harbour. M.
Very thick	W.N.W. 4.	Ebb	Stranded; got off	Nil.	Waiting off and on to put pilot on shore.	No	- - - -	No. R.W.
Very thick	W. 2	Ebb; 1 hour flood in stream.	Stranded, got off	Nil.	Keeping too close to shore in a fog.	No	Thick weather, and flood setting her in.	No. M.
Hazy	W. 3	½ ebb	Stranded; got off	Nil.	Gale; no lead hove; hazy weather.	No	None; but through the carelessness of the master in steering.	No. C.C.

Vessels in Distress on the East Coast of England,

Name of Ship. 1	Port of Registry (if British). 2	Port sailed from. 3	Date of sailing. 4	Hour of sailing. 5	Weather at Time of sailing. 6	Wind at Time of sailing. 7	Tide Stream at Time of sailing. 8	Port bound to. 9	Whether in Ballast or with Cargo. Ballast. 10	Cargo. 11	Exact Spot where Casualty happened. 12
(92) Favorite - Schooner—134—6. (38 years.)	London -	London -	- -	- -	Fog - -	- -	- - -	Seaham -	Ballast	- -	4 miles S. of Seaham harbour.
(93) Nancy - - Sloop—37—3. (42 years.)	Scarborough -	Scarborough -	5 Dec.	11 A.M.	- - -	W.S.W. 5.	High water -	Hartlepool -	Ballast	- -	Rocks off Redcar.
(94) Augustine - Schooner—115—5. (Age unknown.)	Libourne -	Dunkirk -	- -	- -	- - -	- -	- - -	Hartlepool -	Ballast	- -	Rocks off Redcar.
(95) Comely - Schooner—100—5. (Age unknown.)	Inverkeithing	Rotterdam -	27 Nov.	- -	Snowy -	S.E. 10	- - -	Grangemouth	- -	Loaded	Rocks; Newbiggen Point.
(96) J. and A. Gorving. Schooner—123—6. (10 years.)	Shields -	Maldon -	18 Nov.	- -	- - -	- -	- - -	Shields -	Ballast	- -	West Nab Flamborough Head.
(97) Betsey - Schooner—84—4. (Age unknown.)	Yarmouth -	Yarmouth -	5 Dec.	Unknown	Unknown -	Unknown	Unknown -	Middlesbrough	Ballast	- -	Rocks off Redcar.
(98) Mary Anne - Sloop—44—4. (28 years.)	Woodbridge -	Woodbridge -	5 Dec.	10 A.M.	Foggy - -	S. 7	Running S.W.	Hartlepool -	Ballast	- -	Off Redcar
(99) Earl Talbot - Brig—176—7. (16 years.)	Shields -	London -	8 Dec.	- -	- - -	- -	- - -	Shields - -	Ballast	- -	Rocks near Spanish Battery, mouth of the Tyne.
(100) Ariel - - Barque—302—12. (2 years.)	Sunderland -	Sunderland -	13 Dec.	3 25 P.M.	Dull - -	N., strong. 7.	High water -	Bordeaux -	- -	Coals	Sunderland Bar.
(101) Galatea - - Brig—163—8. (6 years.)	Dartmouth -	Rotterdam -	- -	- -	- - -	- -	- - -	Newcastle -	Ballast	- -	Herd Sand, Tyne.
(102) Fanny Huntley Brig—222—9. (5 years.)	London -	Hull - -	19 Dec.	Noon	Moderate -	W.S.W. 3.	Ebb - -	Middlesbrough	Ballast	- -	100 yards N. of E. Pier, Whitby Harbour.
(103) Osprey, - Steamer—383—24. (1 year.)	Hartlepool -	Hamburgh -	21 Dec.	8 A.M.	Fresh breeze -	W.N.W. 6.	Flood - -	Hartlepool -	- -	General	Hartlepool Harbour.
(104) Major - - Schooner—82—6. (8 years.)	Grangemouth	Sunderland -	22 Dec.	6 15 P.M.	Snow gale. 10	W.N.W.	Flood - -	Dundee -	- -	Coals	20 miles S. by W. of Stockton.
(105) Flying Dutchman Brig—166—8. (Age unknown.)	Dundee -	Shields - -	25 Dec.	- -	Stormy - -	N.W. 4	Ebb - -	Dundee -	- -	Coals	Close to the Big Farn Island.
(106) Banff - - Schooner—94—5. (57 years.)	Harwich -	London -	21 Dec.	3 A.M.	Fine - -	S.W., moderate.	1 knot - -	Sunderland -	Ballast	- -	Coatham, near Redcar.
1857.											
(107) Blossom - - Schooner—51—4. (15 years.)	Perth - -	Shields - -	2 Jan.	9 A.M.	Stormy - -	W.S.W.; fresh. 5.	2½ to 3 knots	Perth - -	- -	Coals	7 miles E. of Sunderland Point.
(108) Emulous - - Brig—179—7. (39 years.)	Whitby - -	W. Hartlepool	2 Jan.	8 A.M.	Fine; moderate	W. by S.	- - -	London -	- -	Coals	Tees - -
(109) Duke - - Brig—134—6. (15 years.)	Lynn - -	Seaham - -	2 Jan.	- -	Fine - -	W.S.W.	- - -	Lynn - -	- -	Coals	Middleton Sand, Hartlepool.
(110) Enterprise - Schooner—106—7. (Age unknown.)	Lynn - -	Newcastle -	- -	- -	- - -	- -	- - -	Lynn - -	- -	Coals	Newbiggin -
(111) William IV. - Schooner—62—3. (26 years.)	Clay - -	London -	2 Jan.	7 A.M.	- - -	- -	- - -	Shields - -	Ballast	- -	1 mile S. of Filey.
(112) Union - - Brig—122—8. (57 years.)	Weymouth -	Weymouth -	31 Dec.	4 P.M.	Fine. 5 -	N.W.	Southerly -	Hartlepool -	Ballast	- -	Middleton Sand, Hartlepool.
(113) Chance - Brig—134—7. (15 years.)	Whitstable -	Whitstable -	2 Jan.	- -	Fine - -	S. & W.	Not in offing at time.	Hartlepool -	Ballast	- -	½ mile S. of Seaton Carew
(114) Medora - - Brig—201—7. (10 years.)	Whitby - -	London - -	1 Jan.	5 A.M.	Not known -	- -	- - -	Whitby - -	Ballast	- -	1¼ mile N.W. of Whitby.
(115) Port Glasgow - Schooner—85—5. (25 years.)	Whitby - -	London - -	- -	- -	Fine - -	S.W.; moderate.	Unknown -	Whitby - -	Ballast	- -	Lough Dale, Whitby.
(116) Zephyrus - Brig—211—8. (11 years.)	Whitby -	London - -	1 Jan.	- -	Fine - -	W. to S.; moderate.	Neap tide -	Whitby - -	Ballast	- -	Hartlepool, W. dock.
(117) Stanley - - Brig—208—8. (14 years.)	Whitby -	London - -	1 Jan.	- -	- -	Not known	- - -	Hartlepool -	Ballast	- -	Middleton Sand, Hartlepool.

Islands and Flamborough Head, in 1856—*continued.*

Weather at Time of Casualty. 15	Wind at Time of Casualty. 16	Tide at Time of Casualty. 17	Nature of Casualty and whether occasioning total Loss or only partial Damage. 18	Lives lost. 19	Circumstances which caused the Casualty. 20	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21	State any Particulars that can throw light on the Cause of the Casualty. 22	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland or Shields, have saved the Vessel? 23
Hazy - -	W.S.W. 5.	Last quarter, ebb.	Stranded: got off -	Nil.	Mistaking a light of lime-kiln at Castle Eden Dean for Hartlepool Lights.	- - - -	Mistaking light of lime-kiln for Hartlepool lights.	No. Redcar most fitting as harbour of refuge. O.
Thick - -	W.S.W. 6.	¾ flood -	Stranded; got off -	Nil.	Too close to shore; fog; lead not hove. Struck on rocks.	No - -	Solely owing to the fog -	No. R.W.
Thick -	W.S.W. 6.	¾ flood -	Stranded; total -	Nil.	Fog; no lead hove; struck on rocks.	—	—	—
Hazy - -	W.S.W. 5.	Unknown -	Stranded; got off -	Nil.	Fog; no lead hove -	No - -	Thick weather -	No. M. and O.
Thick -	S. by W. 6.	2 hours' flood	Struck; seriously damaged.	Nil.	Thick weather; too close to shore; no lead going.	—	—	—
Thick - -	W.S.W. 7.	¼ ebb -	Stranded; got off -	Nil.	Got too near to rocks, staying her; when she wore, she went on to rocks	No - -	In consequence of missing stays.	No. C.C.
Hazy - -	S.W. 10	¾ flood -	Stranded on rocks; total	Nil.	Sprung a leak and became unmanageable; got on rocks.	No - -	Weather being hazy, Seaton Carew Lights not visible.	Yes; at Redcar. M.
Clear - -	S.W. 7	¾ flood -	Struck on rocks; got off.	Nil.	Steam tug threw off tow rope too soon; vessel not having enough sail, got ashore.	No - -	Entering her port of destination, strong wind drove the vessel to leeward, and steam tug letting go rope.	Shields, if any. R.W.
Dull - -	N. 6	High water -	Stranded; got off -	Nil.	Reef of seas while crossing the bar caused her to strike.	No - -	Wreck entirely owing to a reef of seas while crossing the bar.	No. Vessel was towed by 2 steam tugs into the southern entrance of the S. dock, and so salved before getting to sea. Question not applicable. O.
Hazy - -	W.N.W. 8	½ ebb - -	Stranded; got off -	Nil.	Tow rope broke.	No.	—	—
Snow squall -	E. 12	High water -	Struck pier; partial -	Nil.	Slightly struck on a bar, and losing steerage way ran against S.E. pier.	No - -	Entrance to Whitby harbour not being of sufficient width.	Yes. Had entrance to Whitby Harbour been wider, and greater depth of water, accident would not have occurred.
Strong gale -	N.E. 9	½ flood -	Foundered; recovered	Nil.	Struck the ground, and was thrown against the N. pier; took bar too soon.	No - -	Gale from E.N.E., and vessel obliged to run for the harbour before sufficient water on the bar, struck the ground and sunk, but recovered and repaired.	Yes. Had there been a refuge harbour she could have entered at any state of the tide, and been saved. C.C.
Snow storm -	N.E. 11	Unknown -	Leaky; partial -	Nil.	Heavy sea strained ship, caused her to leak, &c. &c.	Yes. Driven from Berwick to Bridlington.	Shipping a heavy sea off Sunderland which shifted the cargo.	Yes. A refuge harbour at Hartlepool would have saved her. She got into Bridlington with assistance. O. and M.
Snow - -	N.E. 12	Flood - -	Foundered; total -	8	Bad weather; rode down at her anchor off N. Sunderland.	Yes; as far as Berwick North.	Ship making water, and no place of safety within reach.	Yes. Had there been a harbour of refuge under Coquet Island, she would have been able to reach it.
Hazy - -	N.E. 12	Flood; 1 knot setting N.	Stranded; got off -	Nil.	Dismasted by stress of weather; abandoned by crew off Sunderland.	No - -	Carrying a press of canvass to keep off a lee shore. Had reached N. to Hartlepool, when she was dismasted and abandoned.	Yes; at Redcar. R.W.
Hazy - -	W.N.W. 6	Last ¾ flood -	Foundered; total -	Nil. £400	Heavy sea. Sprung a leak, and went down immediately.	No - -	- - - -	No. M.
Sleet - -	E.N.E. 11	¾ ebb - -	Stranded; got off -	Nil. £400.	Sprung a leak in gale; run her on sand for safety.	Yes. Driven from S. cheek of Robin Hood's Bay to Tees.	Want of an accessible harbour.	Yes; either Whitby, Redcar, or Hartlepool. M. or O.
Hail - -	E.N.E. 10	½ flood - -	Stranded - - -	1	Stress of weather; lost sails, &c., and drifted on beach.	—	—	—
Sleet - -	E. 10	Low water -	Stranded; total -	7	Drifted; struck and went to pieces.	—	—	—
Thick rain -	E. by N. 12	High water -	Stranded; got off -	Nil.	Drove from anchors in Filey Bay.	- - -	- - - -	Yes. Filey.
Snow - -	E. 10	4 hours, flood	Stranded; got off -	Nil.	Struck the reef in making harbour, and drifted on sand.	No - -	Could not run vessel; insufficiency of water; let go anchor; chain parted; went on sands.	Yes. Harbour at Filey. Whitby, or Redcar would have saved her. M.
Hail - -	E. by N. 10	½ flood -	Stranded; total -	Nil. £600.	Thrown on beam ends, and drifted ashore.	No - -	In running vessel for port ballast shifted.	Yes. Redcar. C.C.
Snow - -	E. by S. 11	1 hour before high water.	Stranded; got off -	Nil. £600.	Ran ashore to save life; could not keep off land.	No - -	Off Whitby early in morning; could not get northerly nor take harbour.	Yes. Whitby. M. or O.
Thick - -	E. 11	4 hours' ebb -	Stranded; got off -	Nil. £300.	Violent gale; could not keep off.	No - -	Brought up in Whitby Roads; cut away mast; broke chains and drove to Lythdale, 3 miles.	Yes. Whitby. C.C.
Snow - -	E.N.E. 10	2 hours' flood-	Struck pier; partial -	Nil. £2,100.	Running for shelter, struck pier, stove bows and foundered.	Driven past Whitby weather bound, reached Hartlepool N.	Shallow water and breakers in Tees Bay deprived vessel of steerage and drove her against pier.	Yes. Whitby. C.C.
Sleet - -	E.N.E. 10	5 hours' flood-	Stranded; got off -	Nil.	Running for shelter; disabled by sea; struck pier and drove on sands.	No - -	Trying to take harbour at Hartlepool struck by heavy sea.	Yes. Hartlepool. C.C

Vessels in distress on the EAST COAST of ENGLAND, betw

Name of Ship. 1	Port of Registry (if British). 2	Port sailed from. 3	Date of sailing. 4	Hour of sailing. 5	Weather at Time of sailing. 6	Wind at Time of sailing. 7	Tide Stream at Time of sailing. 8	Port bound to. 9	Whether in Ballast or with Cargo. Ballast. 10	Cargo. 11	Exact Spot where Casualty happened. 12
(118) Amelia - Brig—237—10 (Age unknown.)	Whitby -	Hartlepool -	- -	- -	- - -	- -	- - -	London -	- -	Coals -	Entrance of Runswick Bay
(119) Peter and Mary Schooner—78—4 (Age unknown.)	Whitby - -	Shields - -	- -	- -	- Not known	-	- - -	London -	- -	Coals	Ditto
(120) Queen Dowager Schooner—120—6 (14 years.)	Whitby - -	Gravesend -	- -	- -	- Not known	-	- - -	Hartlepool -	Ballast	- -	Robin Hood's Bay.
(121) Mary and Ann Schooner—10—4 (20 years)	Whitby - -	Shields - -	- -	-	Not known -	- -	Neap tide -	Woolwich -	- -	Coals	Ditto
(122) Northumberland Brig—196—8 (12 years.)	Whitby - -	London -	1 Jan.	- -	- Not known	-	- - -	Sunderland -	Ballast	- -	Scarborough Sands.
(123) Atlantic - - Brig—213—8 (18 years.)	Shields - -	London -	- -	- -	- - -	- -	- - -	Shields - -	Ballast	- -	Off Flambro' Head.
(124) Thompson - Brig—190—7 (Age unknown.)	Whitby -	London - -	2 Jan.	- -	- -	Not known	- -	Shields - -	Ballast	- -	Scarborough Sands; near S. Pier.
(125) Harmonie - Barque—210—13 (14 years.)	- - -	Liverpool -	27 Dec.	11 A.M.	- - -	N., moderate.	- - -	Shields - -	- -	Salt	2 miles N. of Bamborough Castle.
(126) Ratcliffe - Barque—288—9 (49 years.)	Whitby -	Hartlepool -	2 Jan.	8 P.M.	- - -	W.	Not known -	London -	- -	Coals -	Filey Brig.
(127) Mary & Jane - Schooner—118—7 (12 years.)	Teignmouth -	Teignmouth -	1 Jan.	- -	Fine - -	W.S.W. 4.	4 hours' flood	S. Shields -	Ballast	- -	1½ mile S. of Whitby.
(128) Ann - - Brig—146—7 (8 years.)	Torquay -	Torquay -	1 Jan.	11 A.M.	- - -	S.W.	High water -	Hartlepool -	Ballast	- -	Beach, near Redcar.
(129) Rienzi - - Brig—188—7 (Age unknown.)	Sunderland -	London -	2 Jan.	8 or 9 A.M.	Unknown -	Unknown	High water -	Sunderland -	Ballast	- -	Abreast of Hendon Mill.
(130) Emily - - Brig—204—8 (7 years.)	Sunderland -	London -	2 Jan.	- -	Unknown -	Unknown	- - -	Sunderland -	Ballast	- -	Hawthorne Dean, near Seaham.
(131) Empress - Brig—287—10 (16 years.)	Sunderland -	London -	2 Jan.	- -	Unknown -	Moderate S.W.	½ ebb - -	Sunderland -	Ballast	- -	Long Scar Rocks.
(132) Lady Aberdeen Brig—198—6 (45 years.)	Sunderland -	London -	2 Jan.	8 30 A.M.	- - -	S. to S.W.	High water -	Sunderland -	Ballast	- -	Hartlepool Outer Basin.
(133) One - - Brig—211—9 (7 years.)	Sunderland -	Colchester -	2 Jan.	10 A.M.	Fine - -	W.N.W.	4 hours' flood	Sunderland -	Ballast	- -	Ryhope Dene.
(134) Gulturus - Brig—333—11 (9 years.)	Sunderland -	Hull - -	2 Jan.	10 A.M.	Moderate -	S.	Unknown -	Shields - -	Ballast	- -	Rocks, near Amble Pier.
(135) Jane - - Brig—171—7 (13 years.)	Sunderland -	Rochester -	1 Jan.	1 A.M.	Moderate -	S.W.	½ ebb - -	Sunderland -	Ballast	- -	Marske Beach.
(136) Honor - Brig—154—7 (53 years.)	Blyth - -	Boulogne -	1 Jan.	11 P.M.	Strong breeze	W.	Flood - -	Blyth - -	Ballast	- -	1½ miles, Hartlepool Heugh.
(137) John Baker - Brig—123—7 (40 years.)	Blyth - -	Calais - -	1 Jan.	Morning tide.	Fine - -	S.W.	Flood - -	Blyth - -	Ballast	- -	Off Hartlepool
(138) James Bales - Brig—229—9 (17 years.)	Shields - -	Shields - -	2 Jan.	Noon	Fine - -	W. by N.	High water -	Carthagena -	- -	Coke -	Behind Sunderland Pier.
(139) Happy Return Smack—23—5 (Age unknown.)	Scarborough -	Fishing Ground	3 Jan.	Morning	- - -	S.S.E. 10.	High water -	Scarborough -	Ballast	- -	1 mile S. of Scarborough.
(140) Eurus - - Brig—272—11 (22 years.)	South Shields	London -	2 Jan.	4 P.M.	Unknown -	Unknown	- - -	Shields -	- -	Coals	Scarborough sands, near W. pier.
(141) Wilsons - Brig—227—9 (20 years.)	Shields -	Shields -	2 Jan.	7 A.M.	Unknown -	Unknown	- - -	London -	- -	Coals	Scarborough sand, W. pier.
(142) Nymph - - Brig—220—8 (Age unknown.)	Shields -	London -	Unknown	Unknown	- - -	- -	- - -	Shields -	Ballast	- -	Middleton sands.
(143) Epsilon - Brig—210—8 (Age unknown.)	Blyth - -	Shields -	2 Jan.	10 P.M.	- - -	S., light	Flood .	France -	- -	Coals	1 mile S. of Dunstanborough Castle.
(144) Wards - Brig—188—8 (10 years.)	Blyth - -	Havre -	25 Dec.	1 P.M.	- - -	S.W. 5	Flood -	Blyth - -	Ballast	- -	Budle sands, near Bamborough.
(145) Era - - Brig—192—9 (16 years.)	Rochester -	Rochester -	2 Jan.	7 30 . .	Stormy -	Gale. 10	Ebb - -	Sunderland -	Ballast	- -	Castle Eden -
(146) Don Quixote - Brig—209—9 (15 years.)	Bremen -	Bremen -	- -	- -	- - -	- -	- - -	Sunderland	Ballast	- -	½ mile S. of Seaham harbour.

[slands and Flamborough Head, in 1857—*continued.*

Weather at Time of Casualty. 15	Wind at Time of Casualty. 16	Tide at Time of Casualty. 17	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18	Lives lost. 19	Circumstances which caused the Casualty. 20	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21	State any Particulars that can throw light on the Cause of the Casualty. 22	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23
Snow	E.N.E. 11	½ ebb	Foundered; total	10	Violent gale	Yes; and seen off Whitby about 2 hours before loss.	Violent gale and want of accessible harbour.	Yes; Whitby; both ship and crew. C.C.
Snow	E.N.E. 11	¼ ebb	Foundered; total	4 £600	Violent gale	Yes; how far not known.	Want of accessible harbour.	Yes; Whitby. C.C.
Squally	E.N.E. 9	Low water	Foundered; total	Nil. £1,250	Stress of weather	No	Want of accessible harbour.	Yes; Filey. C.C.
Squally	E.N.E. 9	½ ebb	Foundered; total	4 £600	Violent gale	No	Want of an accessible harbour at Whitby.	Yes; Whitby. Vessel lost 6 miles S. of Whitby. C.C.
Squally	E. 10	Last quarter flood.	Stranded; got off	Nil.	Stress of weather; sails split, &c.	No	Violent gale dead on shore.	Yes; Filey. C.C.
Hazy	E. 9	- - -	Stranded; got off	Nil.	Stress of weather	No	Gale split sails, rendered vessel unmanageable.	—
Heavy squall	E. 10	Last quarter flood.	Stranded; got off	Nil.	Lost sails, &c.; hove cable on pier, which broke, and ship fell away.	No	Violent gale dead on shore, and want of harbour of refuge.	Yes; Filey. C.C.
Snow	E. 9	½ ebb	Stranded; total	1 £2,500	Parted anchors; drove ashore.	—	—	—
Thick rain	E. by N. 12.	¼ ebb	Stranded; total	Nil. £1,800	Gale; could not make Flamborough Head, ran ashore to save life.	No	Want of accessible harbour.	Yes; Filey. C.C.
Thick	E.N.E. 11.	2 hours' ebb	Stranded; total	Nil. £700	Heavy gale and sea on lee-shore.	No	- - - -	Yes; if harbour at Filey, might have been saved. C.C.
Sleet	E.N.E. 11.	High water, 5 P.M.	Stranded; got off	Nil.	Stress of weather; ballast shifted.	No	- - - -	If harbour at Redcar, Yes. C.C.
Bad	E.N.E. 10.	High water	Stranded; got off	Nil.	Stress of weather; ballast shifted.	No	Struck by heavy sea	Yes; harbour of refuge at Hendon Bay would have saved her. O.
Foul	E.N.E. 12.	High water	Stranded; total	Nil.	Stress of weather; drove on rocks.	Yes; 8 miles	Ballast shifted and threw her on broadside.	Yes; Ditto. O.
Squally	E.N.E. 10.	½ ebb	Stranded; total	6 £1,300	Dismasted in gale; drove ashore.	No	Nothing known; master drowned.	Yes; might have taken refuge, if there had been harbour between Bridlington and Hartlepool. O.
Sleet	E.N.E. 10.	½ flood	*Foundered; total	Nil.	Running into Hartlepool disabled, struck on stones.	No	Foundation of new pier under water, and nothing to denote same.	Yes; Hartlepool. O.
Thick	E. 10	¼ flood	Stranded; got off	Nil. £400	Stress of weather; canted Ballast.	No	Gale of wind and heavy sea; could not make Sunderland Harbour.	Yes; Redcar or Hartlepool might have been reached. C.C.
Sleet	E.S.E. 11.	- - -	Stranded; got off	Nil. £3,000	Stress of weather	No; but driven past her port; and wrecked at Amble.	Driven on lee shore	Yes; Shields. O.
Gale	E.N.E. 11.	¼ ebb	Stranded; total	Nil. £1,000	Stress of weather split sails; could not command vessel.	No	Force of the gale only	Yes; Whitby or Redcar. O.
Sleet	E.N.E. 10.	2 hours' ebb	Foundered; total	7 £1,000	Thrown by sea on beam ends; seen to go down with all hands.	No	Severe gale; heavy sea	Yes; Redcar. C.C.
Sleet	E. by N. 10.	Ebb	Foundered; total	7 £900	Unknown; supposed to have sunk off Hartlepool.	No	- - ditto - -	Yes; Redcar. C.C.
Stormy	E.N.E. 11.	1 hour ebb	Stranded; got off	Nil. £1,200	Struck pier while making harbour.	Yes; S. of Hartlepool; could not keep off land.	Unmanageable in broken water on bar; drove against pier.	Yes; either Shields or Sunderland. C.C.
Snow squall	E. 11	½ ebb	Stranded; total	Nil. £100	Stress of weather; sails split, &c.	Yes; driven by weather from fishing ground, and stranded 1 mile S. of Scarborough.	Stormy weather	Yes; Filey. C.C.
Snow	E. 10	¼ ebb	Stranded; total	4	Standard of wheel broke in trying to make Scarborough.	No	- - - -	Yes; Filey. O.
Snow squall	E. 10	¼ ebb	Stranded; total	1 £120	Stress of weather; running for harbour, drove on sand.	Yes; a little way beyond Flamborough Head.	Made for shore to save life.	Yes; if at Filey might have been saved. O.
Sleet	E. 10	- - -	Stranded; total	Nil.	Stress of weather; lost steerage way.	—	—	—
Thick	E. 9	¼ ebb	Foundered; total	8 £1,400	Seen to capsize in violent gale.	Yes; not known how far.	Severe gale and heavy sea.	Yes; Shields. C.C.
Snow	E. by N. 10.	High water	Stranded; got off	Nil. £500	Heavy sea; parted anchors.	No	Severe gale and heavy sea.	Yes; Shields. C.C.
Snow	E. by N. 10.	Flowing	Stranded; total	1	Stress of weather; driven from anchors.	No	Violence of the storm	Yes; Whitby. M.
Snow	E. 10	High water	Stranded; total	Nil. £1,200	Stress of weather; split sails; ran for the shore.	—	—	—

* This vessel was subsequently picked up derelict and repaired.

Vessels in distress on the EAST COAST of ENGLAND, be

Name of Ship. 1	Port of Registry (if British). 2	Port sailed from. 3	Date of sailing. 4	Hour of sailing. 5	Weather at Time of sailing. 6	Wind at Time of sailing. 7	Tide Stream at Time of sailing. 8	Port bound to. 9	Whether in Ballast or with Cargo.		Exact Sp where Casua happened. 12
									Ballast. 10	Cargo. 11	
(147) Lively Schooner—72—5. (20 years.)	Guernsey	London	1 Jan.	- -	- - -	- -	- - -	Shields	Ballast	- -	Near Whitb
(148) Gretina Schooner—70—4. (Age unknown.)	Foreign	Dysart	2 Jan.	- -	- - -	- -	- - -	Bremen	- -	Coals	Blyth sand
(149) Jubilee Brig—111—6. (12 years.)	Guernsey	Portsmouth	31 Dec.	- -	- - -	W.S.W., fresh.	- - -	Newcastle	Ballast	- -	Seaton Ca
(150) Trois Sœurs Schooner—79—6. (4 years.)	Cherbourg	Cherbourg	- -	- -	- - -	- -	- - -	Coal Port	Ballast	- -	Behind Scar- borough Pier.
(151) Unknown Schooner—100—6. (Age unknown.)	- - -	- - -	- -	- -	- - -	- -	- - -	- - -	- -	- -	Near the Lo Scar Buo
(152) Sophia Brig—204—12. (Age unknown.)	Oporto	Newcastle	3 Jan.	3 A.M.	- - -	- -	- - -	Oporto	- -	Coals	Hudson ne Amble.
(153) George Schooner—116—6. (7 years.)	Colchester	Colchester	1 Jan.	Noon	Fine	S.W., moderate.	Ebb	Seaham	Ballast	- -	Robin Hoo Bay.
(154) Mary Schooner—231—7. (15 years.)	Colchester	Colchester	1 Jan.	Unknown	Fair	S.W., moderate.	Ebb	Sunderland	Ballast	- -	1½ mile S. o Hartlepo Light.
(155) Native Schooner—85—5. (24 years.)	Exeter	Exeter	31 Dec.	Unknown	Unknown	E. 10	Unknown	Hartlepool ?	Ballast	- -	Middleton sands, Har tlepool.
(156) Reform Schooner—90—5. (Age unknown.)	Exeter	Swansea	24 Dec.	5 P.M.	Clear	N.W. 5	Full tide	Newcastle	- -	Iron	½ mile fro Cullercoats Pier.
(157) Aurora Sloop—51—4. (3 years.)	Goole	Grimsby	- -	- -	- - -	-	- - -	Newcastle	- -	Linseed	Souter Point
(158) Will. Alexander Brig—191—7. (20 years.)	Hartlepool	Hartlepool	2 Jan.	8 P.M.	Strong breeze	N. 6	Flood	London	- -	Coals	Tees Mouth
(159) William Pitt Brig—223—7. (15 years.)	Hartlepool	London	2 Jan.	Unknown	- - -	W.N.W.	Flood	Hartlepool	Ballast	- -	¼ mile fro Whitby.
(160) Joven Dolores Bark—214—9. (8 years.)	Melbourne	London	26 Dec.	- -	Thick	W. 5	Flood strong	Middlesbrough	Ballast	- -	300 yards W. of Hartlepool Pier.
(161) Agnes Brig—198—8. (Age unknown.)	Lynn	London	2 Jan.	9 A.M.	Fresh	S.	½ flood	Hartlepool	Ballast	- -	Middleton Sand
(162) Jason Brig—164—6. (38 years.)	Lynn	Lynn	19 Dec.	Noon	Bad	S.E.	Near high water.	Hartlepool	Ballast	- -	3 miles S. of Farn Island.
(163) Pandora Schooner—82—6. (11 years.)	Margate	Margate	2 Jan.	3 P.M.	Fine	W.S.W. 5	Unknown	Hartlepool	Ballast	- -	W. Dock, Har tlepool.
(164) Perseverance Brig—299—11. (Age unknown.)	Newcastle	Newcastle	- -	- -	- - -	- -	- - -	Copenhagen	- -	Coals	Kilnsea Beach
(165) Hibbert Brig—231—9. (14 years.)	Newcastle	London	1 Jan.	- -	- - -	- -	- - -	Newcastle	Ballast	- -	¼ mile N. of Seaton Carew
(166) Eclipse Schooner—66—4. (40 years.)	Ipswich	Ipswich	1 Jan.	- -	Thick	E. 10	Unknown	Seaham	Ballast	- -	Hawthorn Hive Sunderland
(167) Dalkeith Schooner—87—5. (Age unknown.)	Inverness	Sunderland	3 Jan.	9 A.M.	Moderate	S.S.E. 12	½ ebb	Inverness	- -	Coals	Farn Island
(168) Duke Brig—134—6. (15 years.)	Lynn	Seaham	- -	- -	- - -	- -	- - -	Lynn	- -	Coals	Middleton Sand
(169) Abeona Brig—159—6. (44 years.)	London	London	2 Jan.	- -	- - -	- -	- - -	Hartlepool	Ballast	- -	Sandsend, Whitby.
(170) George IV. Brig—245—9. (40 years.)	London	London	1 Jan.	- -	Fresh	S.	High water	Shields	Ballast	- -	West Dock, Hartlepool.
(171) Georgiana Schooner—80—4. (2 years.)	Inverness	Inverness	30 Dec.	- -	Showery	W. strong	High water	London	- -	Potatoes	Near Amble Pier.
(172) Emma Barque—260—9. (7 years.)	N. Shields	Shields	2 Jan.	10 A.M.	Moderate	N.	Flood, 6 hours' ebb.	Foreign	- -	Coals	Redcar Rocks

Islands and Flamborough Head, in 1857—*continued.*

Weather at Time of Casualty. 15	Wind at Time of Casualty. 16	Tide at Time of Casualty. 17	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18	Lives lost. 19	Circumstances which caused the Casualty. 20	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21	State any Particulars that can throw light on the Cause of the Casualty. 22	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23
Squally	E.N.E. 11.	Low water	Stranded	Nil. £800	Disabled by bad weather and collision; drifted ashore.	—	—	—
Snow	E. 10	- - -	Stranded; got off	Nil.	Gale dead in shore.	—	—	—
Thick	E.N.E., 10.	⅓ flood	Stranded; total	Nil. £300	Disabled; heavy sea; unmanageable.	—	—	—
Stormy	E.N.E. 11.	- - -	Stranded; got off	Nil. £350	Running for harbour, truck pier.	—	—	—
Sleet	E. 10	- - -	Foundered; total	6	Struck by sea. Was seen to go on beam ends and founder.	—	—	—
Snow	E. 10	⅓ flood	Stranded; total	Nil.	Dragged anchors in gale	—	—	—
Squally	E.N.E. 9.	High water	Stranded; got off	Nil. £900	Stress of weather	No	Heavy sea; could not keep vessel off land.	Yes; Redcar. M.
Hail	E.N.E. 10.	⅓ ebb	Stranded; total	2 £800	Stress of weather; canted ballast; lost masts; and drove on shore.	No	Sea breaking on deck, shifted ballast.	Yes; Redcar. M.
Hail, sleet	E.N.E. 10.	High water	Stranded; total	Nil.	Drove ashore and went to pieces in a gale.	No	Unmanageable from loss of rudder.	No; owner recommends harbour at Redcar. O.
Snow	E.N.E. 9.	Near springs	Foundered; total	5 £200	Stress of weather	No.	—	—
Stormy	E.N.E. 11.	- - -	Stranded	4 £200	Stress of weather.	—	—	—
Thick	E. by N. 10	Flood	Foundered; total	7 £1,120	Unknown; seen off Flamborough Head, but not after.	Yes; from Flamborough Head.	Supposed lost in Hartlepool Bay during gale.	Yes; Hartlepool. C.C.
Snow	E. 11	¼ ebb	Stranded	Nil. £300	Stress of weather	No	Unmanageable, canting ballast in gale; reached Rockcliff, distant 10 miles.	Yes; Hartlepool. C.C.
Snow	E.N.E. 10	High water	Stranded; total	Nil.	Stress of weather, drifted on rocks.	- - -	Severity of the gale, which disabled her and drove her ashore.	Yes; Redcar. M.
Sleet	E.N.E. 10	5 hours' flood	Stranded; got off	Nil.	Stress of weather, disabled, drifted, unmanageable.	No	- - - -	Yes; Filey. M.
Snow	E. 10	Low water	Stranded; total	Nil. £800	Stress of weather, driven ashore.	No	Bad weather.	No. M.
Sleet	E.N.E. 10	High water	Struck pier; partial	Nil.	Making harbour for shelter, struck on rocks at entrance of W. dock.	No	Struck on new work of pier.	No. Sub. C.C.
Rough	E. by N. 11	- - -	Stranded; total	4 £1,800	Could not carry sail; drifted.	—	—	—
Squally	E.N.E. 10	- - -	Stranded	Nil.	Severe gale caused her to leak, pumps useless, got ashore trying to wear.	—	—	—
Thick; snow	E. 10	Last hour ebb	Stranded; got off	Nil.	Disabled by wind and sea; drifted to leeward.	No; but driven N. past her port.	—	—
Snow	E.S.E. 9	High water	Lost sails, &c.	Nil. £100	Stress of weather, lost storm sails and bulwarks.	- - -	Violence of wind	No; driven before wind in N.W. direction from off Farn Islands to Berwick; master thinks Hartlepool most convenient for a harbour of refuge.
Hail and sleet	E.N.E. 10	- - -	Stranded	1	—	—	—	—
Hazy	E.N.E. 11	- - -	Stranded	Nil. £200	Stress of weather, lost sails and went on rocks.	Unknown	- - - -	Yes; if harbour at Filey or Whitby.
Sleet	E.N.E. 10	- - -	Stranded; got off	Nil.	In taking the harbour, struck on some stones.	No	Vessel unable to keep sea, obliged to run for tidal harbour.	Heavy gale E. by S. took vessel off Scarborough, and got off Hartlepool Bay on the 4th January. If refuge harbour at Hartlepool Bay, would have been saved. M. or O.
Sleet	E. by S. 12	1 hour flood	Stranded; total loss	Nil. £1,300	Stress of weather, lost sails, became unmanageable.	Yes; to Souter Point.	Sudden change of wind	Yes; Shields.
Thick	E.N.E. 11	Low water	Stranded; total	Nil. £2,500	Gale, lee shore	Yes; Flamborough Head.	Heavy gale from E.S.E. to E.N.E., with snow.	Yes; at Redcar or Hartlepool. M.

Vessels in distress on the East Coast of England,

Name of Ship. 1	Port of Registry (If British). 2	Port sailed from. 3	Date of sailing. 4	Hour of sailing. 5	Weather at Time of sailing. 6	Wind at Time of sailing. 7	Tide Stream at Time of sailing. 8	Port bound to. 9	Whether in Ballast or with Cargo.		Exact Spot where Casualty happened. 12
									Ballast. 10	Cargo. 11	
(173) Stour - - Schooner—81—5 (19 years.)	Colchester -	Colchester -	1 Jan.	7 A.M.	Fair - -	S.W. Moderate.	Ebb - -	Shields -	Ballast	- -	Tynemouth .
(174) Cathinka - Brig—182—8 (21 years.)	Weismar -	Antwerp -	15 Dec.	- -	- - -	- -	- - -	Hartlepool -	Ballast	- -	Hartlepool .
(175) Samuel Cunard Bark—206—10 (17 years.)	Antigua -	Gothenburg -	25 Dec.	7 A.M.	- - -	E.N.E. Gale.	Unknown -	London - -	- -	Timber	4 miles from Scarborough.
(176) Active - Brig—168—7 (11 years.)	Whitstable -	Whitstable -	1 Jan.	- -	Fine - -	W.S.W.	Low water -	Shields -	Ballast	- -	Herd Sand .
(177) Sarah Ellen - Brig—195—7 (17 years.)	Newcastle -	London -	2 Jan.	- -	- - -	- -	- - -	Shields -	Ballast	- -	Herd Sand -
(178) Hippocampi - Brig—154—7 (Age unknown.)	London -	Middlesbrough	- -	- -	- - -	- -	- - -	Genoa - -	- -	Iron	Middlesbrough
(179) Ariel - - Brig—230—11 (18 years.)	Whitby -	Memel - -	- -	- -	- - -	- -	- - -	London -	- -	Wood	Sea - -
(180) Commerce - Brig—204—7 (75 years.)	Sunderland -	Sunderland -	13 Jan.	3 A.M.	Fine - -	W.S.W.	High water -	London -	- -	Coals	Whitby W.S.W. 13 miles.
(181) Seven - Brig—256—9 (Age unknown.)	Shields -	London -	2 Jan.	- -	Moderate -	W.S.W.	Unknown -	S. Shields -	Ballast	- -	W. [illegible] Hartlepool.
(182) Jane - - Brig—135—6 (33 years.)	Berwick -	Shields -	- -	- -	- - -	- -	- - -	London -	- -	Coals -	West [illegible] Amble.
(183) Isabella - Schooner—82—4 (18 years.)	Newcastle -	St. Osyth -	15 Jan.	- -	- - -	- -	- - -	Sunderland -	- -	Timber	Sunderland Bar.
(184) Friends - Schooner—67—4 (Age unknown.)	Dundee -	Dundee -	- -	- -	- - -	- -	- - -	London -	- -	Potatoes	Navestone Rock 5 miles E. of Sunderland.
(185) John and Jane Sloop—59—3 (17 years.)	Goole - -	Sunderland -	24 Jan.	11 A.M.	Fine - -	N.N.E. 7	½ flood -	Harwich -	- -	Coals -	Sunderland Bar.
(186) Swallow - Brig—184—8 (Age unknown.)	Poole - -	Poole - -	10 Jan.	- -	Bad - -	E. by S. gale.	Unknown -	Hartlepool -	Ballast	- -	Sea. Hartlepool W. by S. 10 miles.
(187) St. Lawrence - Brig—277—10 (37 years.)	Shields -	Hull - -	- -	-	Unknown	- -	- - -	Shields - -	- -	Salt	Hartlepool Heugh.
(188) Triumph - (Unknown.) 111—7	- - -	- - -	- -	- -	- - -	- -	- - -	- - -	- -	- -	Off Whitby -
(189) Ocean Queen - Brig—198—9 (10 years.)	Blyth - -	Seaham - -	- -	8 20 P.M.	- - -	W.N.W.	Flood - -	London - -	- -	Coals	N. pier, Seaham.
(190) Hope - - Sloop—45—3 (Age unknown.)	Sunderland -	Sunderland -	1 Feb.	6 P.M.	Fine - -	S.W. by S.	High water -	Aberdeen -	- -	Coals	½ mile S. of Hudson Scar.
(191) Robert William Sloop—39—3 (Age unknown.)	Boston - -	Yarmouth -	20 Jan.	9 A.M.	Hazy - -	S.S.W. 5.	1½ knot -	Blyth - -	- -	Wheat	Seaton Scar Rocks.
(192) Salus - - Brig—161—7 (32 years.)	Sunderland -	Sunderland -	31 Jan.	3 P.M.	Fine - -	W.N.W.	High water -	London - -	- -	Coals	Flamborough Head.
(193) Fencer - - Schooner—106—7 (14 years.)	Gravesend -	Hartlepool -	- -	- -	- - -	- -	- - -	Gravesend -	- -	Coals	Whitby Rock
(194) Brunette - Schooner—70—5 (Age unknown.)	Ramsay - -	Hartlepool -	10 Feb.	4 P.M.	- - -	S.W.	Unknown -	Fraserburgh -	- -	Coals	Off Amble -
(195) Ivanhoe, S.S. - S.S.—156—15 (6 years.)	Leith - -	Rotterdam -	16 Feb.	6 A.M.	Moderate - -	S.S.E.	½ ebb - -	Leith - -	- -	General	Scare-crow Bush Rock, S.E. of Big Farn
(196) Ford - - Brig—210—8 (Age unknown.)	Sunderland -	London - -	12 Feb.	- -	Unknown	- -	- - -	Sunderland -	Ballast	- -	300 yards S. of Sunderland S. pier.
(197) Prince Philip - Bark—223—10 (7 years.)	Ostend - -	Shields - -	- -	- -	- - -	- -	- - -	Trieste - -	- -	Coals	Brandlington Drop, Shields.
(198) Aquila - - Brig—88—4 (30 years.)	Scarborough -	Newcastle -	19 Feb.	8 A.M.	Fresh - -	W.N.W. 5	3 to 4 knots; spring tide.	Whitstable -	- -	Coals	10 miles off Whitby.

lands and Flamborough Head, in 1857—*continued.*

Weather at Time of Casualty. 15	Wind at Time of Casualty. 16	Tide at Time of Casualty. 17	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18	Lives lost. 19	Circumstances which caused the Casualty. 20	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21	State any Particulars that can throw light on the Cause of the Casualty. 22	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23
Snow	E. by N. 10	High water	Stranded	Nil.	Tiller disabled by sea, drifted on rocks.	No	Sea broke on board, and drove in stern of vessel.	Yes; at Redcar. M.
Snow	E. 7	¼ flood	Stranded; total	Nil.	Stress of weather; ran ashore to save crew.	—	—	—
Snow squall	E. 11	½ ebb	Stranded; total	1	Stress of weather; could not keep off land.	—	—	—
Snow	E. by N. 12	Low water	Stranded	Nil. £800	Stress of weather	No	Ballast shifted	Yes; Filey. C.C.
Snow	E. by N. 12	Ebb	Stranded	1 £800	Stress of weather; lost masts, &c.	—	—	—
- - -	S.W. 9	- - -	Leaky; partial	Nil.	Striking on a sunken keel.	Unknown	A sunken keel lying in the Gut at Middlesbrough.	—
- - -	- - -	- - -	Capsized; total	11 £1,800	Supposed to have capsized in a gale; found bottom up, and towed to the Tyne.	- - -	- - -	No. C.C.
Heavy	N. by E. 10	Low water	Disabled; partial	Nil.	Heavy sea, washing decks, &c.	No	Stern frame started and hold beams broken.	Yes; Whitby. M.
Sleet	E.N.E. 11	- - -	Struck; foundered	Nil. £2,000	Stress of weather; running in for shelter, struck.	No	- - -	Yes; Redcar. C.C.
Hazy	S.W. by S. 11	- - -	Stranded; got off	Nil.	Thick weather	No	—	—
Cloudy	W.N.W. 9	- - -	Stranded; got off	Nil.	Pilot taking the bar too soon.	- - -	- - -	Taken into Bridlington.
Very thick	W. by N. 7	High water	Stranded; total	Nil. £800	Struck on rock in thick weather.	—	—	—
Squally	N. 6	¼ flood	Stranded; got off	Nil.	Pilot taking harbour too soon.	No	Leaky in consequence of striking, and wind increasing obliged to put into Bridlington, with assistance.	Taken into Bridlington. If harbour of refuge at Bridlington, could have got in without assistance. M.
Squally	Variable 10	High water; 1½ hour flood.	Disabled; partial	Nil.	Stress of weather; running into harbour, disabled, struck on bar	Yes. Reached Hartlepool Light bearing W. by N. 10 miles driven back off Scarborough; wind moderating got to N. of Whitby, and bore up for Bridlington.	Bad weather	Yes; Hartlepool. C.C.
Snow	N.E. by N. 8	Low water	Stranded; total	10 £1,850	Kept too close to land	No	- - -	Yes; Redcar. O.
- - -	E.N.E. 11	- - -	Foundered; total	—	—	—	—	—
Fine	N.N.W. 2	Little past high water.	Struck; got off	Nil. £55	Getting in, the check rope on pier broke.	No	No	No. C.C.
Hazy	S. 3	½ ebb	Stranded; total	Nil.	Not heaving lead in thick weather.	No	- - -	No. M.
Thick	S.S.E. 5	1 hour flood	Stranded; got off	Nil. £200	Running for harbour at low water in thick weather.	Yes. Driven back 100 miles.	Wind S.S.E. Not sufficient water.	Yes; Shields. M.
Fine	S. W. 5	Low water	Struck; foundered	Nil. £810	Neglect of lead	Yes. Driven back 10 miles.	- - -	Yes; Bridlington. O.
Dark; hazy	S.W. 3	- - -	Stranded	Nil.	—	—	—	—
Fog	S.S.W. 4	- - -	Stranded; got off	Nil. £140	Heavy sea unshipped rudder; drove ashore.	—	—	—
Thick	S.E. 1	Last ebb	Stranded; got off	Nil. £3,000	Thick weather	No	Compass incorrect.	No. O.
Coarse	N.E. 5.	- - -	Stranded; got off	Nil.	Struck by heavy sea entering harbour; could not wear; ran her ashore to save her.	No	- - -	If there had been harbour of refuge in Hendon Bay, might have taken it.
Fog	5	- - -	Explosion	1 and 3 injured.	Spontaneous combustion of cargo.	—	—	—
Moderate	W. 2	¼ flood	Foundered; total	Nil. £540	Sprung a leak and foundered in deep water.	- - -	For want of harbour of refuge.	Yes; Redcar. M.

Vessels in Distress on the East Coast of England, betw

Name of Ship. 1	Port of Registry. (if British). 2	Port sailed from. 3	Date of sailing. 4	Hour of sailing. 5	Weather at Time of sailing. 6	Wind at Time of sailing. 7	Tide Stream at Time of sailing. 8	Port bound to. 9	Whether in Ballast or with Cargo. Ballast. 10	Whether in Ballast or with Cargo. Cargo. 11	Exact Spot where Casualty happened. 12
(199) Lisbon Barque—471—13. (Age unknown).	N. Shields	Carthagena	-	-	-	-	-	Shields	Ballast	-	Rocks of Cullercoats.
(200) Equivalent Brig—220—8. (24 years.)	Sunderland	Sunderland	2 Mar.	-	Unknown	-	High water	Hamburgh	-	Coals	N. Sea, 54° N. N. L. 3° E. L.
(201) Krydeseren Schooner—128—8. (Age unknown.)	Tonsberg	Tonsberg	-	-	-	-	-	Shields	-	Timber	Amble
(202) Ryhope Smack—175—8. (30 years.)	Hartlepool	Hartlepool	12 Mar.	2 A.M.	-	W.N.W. 6	High water	London	-	Coals	10 miles E. of Flamborough Head.
(203) Resolution Sloop—47—3. (70 years.)	Sunderland	Kirkcaldy	-	-	Unknown	-	-	Sunderland	-	Iron	Steel Rocks, 1 mile from Boulmer.
(204) Kathleen Brig—158—7. (15 years.)	Hartlepool	Hartlepool	16 Mar.	6 P.M.	-	S.W. 5	Flood	London	-	Coals	Whitby Rocks
(205) Hannah Schooner 78—4. (20 years.)	Yarmouth	Arbroath	11 Mar.	-	Unknown	W.S.W.; gale.	Unknown	Sunderland	-	Timber	Behind S. pier Sunderland.
(206) Effort Schooner—129—7. (26 years.)	Southampton	Southampton	16 Mar.	-	Unknown	-	-	Sunderland	Ballast	-	Behind S. pier
(207) Mary Schooner—61—4. (7 years.)	Sunderland	Sunderland	-	-	-	-	-	Woodbridge	-	Coals	W. pier, Whitby.
(208) Swan Brig—259—8. (18 years)	Sunderland	Altona	18 Mar.	8 A.M.	Dull	S.E.; strong.	High water	Sunderland	Ballast	-	Behind S. pier Sunderland.
(209) George IV. Brig—141—6. (Age unknown.)	Shields	Shields	16 Mar.	-	-	-	-	Hamburgh	-	Coals	Off Flamborough Head.
(210) Spring Barque—331—9. (60 years.)	North Shields	Scheidam	-	-	-	E.N.E.; fine.	¼ flood	Shields	Ballast	-	Spanish Battery, Tyne.
(211) Peamore Schooner—139—6. (16 years.)	Exeter	Rotterdam	18 Mar.	-	Unknown	-	-	Middlesbrough	Ballast	-	Off Seaton Carew
(212) Celerity Smack—60—8. (Age unknown.)	Whitby	Hartlepool	16 Mar.	5 P.M.	Fine	W.S.W.; fresh.	Flood	London	-	Coals	½ mile S. of west pier Whitby.
(213) Columbus Brig—183—7. (30 years.)	Seaham	Seaham	16 Mar.	5 P.M.	Clear	S.S.W. 4.	2½ hours from high water.	London	-	Coals	Middleton sands
(214) Cressimus Brig—208—8. (32 years.)	Scarborough	Hartlepool	16 Mar.	-	-	S.W.; moderate.	High water	London	-	Coals	Middleton sands.
(215) Fancy Barque—290—11. (10 years.)	London	Shields	16 Mar.	-	Moderate	S.S.W.	-	Oran	-	Coals	Sunderland bar
(216) Sisters Barque—687—25. (10 years.)	Rotterdam	Rotterdam	-	-	-	-	-	Sunderland	Ballast	-	Behind N. pier Sunderland.
(217) Unicorn Schooner—136—7. (1 year.)	Jersey	Sunderland	16 Mar.	-	Moderate	S.	-	Jersey	-	Coals	Hartlepool bar
(218) Les Gezusters Barge—687—25. (7 years.)	Rotterdam	Rotterdam	18 Mar.	-	-	S.	-	Sunderland	Ballast	-	Behind N. pier Sunderland.
(219) Concordia Galliott—60—5. (Age unknown.)	Lenvig in Denmark.	Denmark	-	-	-	-	-	London	-	Barley	1½ mile S. of Scarborough rocks.
(220) Neptune Brig—267—11. (46 years.)	Newcastle	Newcastle	-	-	-	-	-	Brest	-	Coals	Sunderland bar
(221) Unknown Galliot; say 100—6. (Age unknown.)	-	-	-	-	-	-	-	-	-	-	Off Hartle
(222) Medina Brig—196—8. (28 years.)	Cowes	Hamburgh	19 Mar.	-	-	S.E. by E.	-	Sunderland	Ballast	-	Marsden rock
(223) William and Matthew. Schooner—119—5 (Age unknown.)	Scarborough	Scarborough	17 Mar.	-	Moderate	N.W.	¾ ebb	London	-	Coals	Scarborough
(224) Wittus Brig—220—10. (17 years.)	Carlscrona	Newcastle	31 Mar.	-	-	-	-	Venice	-	Coals	S. Shields
(225) Expedit Brig—200—8. (Age unknown.)	-	-	-	-	-	-	-	-	-	Timber	Picked up miles off Tynemouth.
(226) Temisconata Brig—113—6. (18 years.)	Lynn	Lynn	1 April	6 or 7 A.M.	Fine; moderate.	W. 3	High water	Seaham	Ballast	-	Near S. pier, Sunderland.
(227) James Brig—186—8 (54 years.)	Shields	Havre	1 April	2 P.M.	Unknown	-	-	Newcastle	Ballast	-	7 miles N. of Scarborough.

Islands and Flamborough Head, in 1857—*continued.*

Weather at Time of Casualty. 15	Wind at Time of Casualty. 16	Tide at Time of Casualty. 17	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18	Lives lost. 19	Circumstances which caused the Wreck. 20	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21	State any Particulars that can throw light on the Cause of the Casualty. 22	Would Harbour of Refuge at Bridlington Filey, Whitby, Redcar, Hartlepool, Sunderland or Shields, have saved the Vessel 23
Fog	Calm 0.	High water	Stranded; got off	Nil. £200.	Thick weather	No	Drunkenness of the master.	Yes; Shields. O.
Showers	W. 5	- - -	Dismasted; partial	Nil. £50.	Squall	No	Squall of wind suddenly came on.	No; got into Sunderland.
Thick	S.S.E. 10	- - -	Stranded	Nil.	Gale; thick weather.	—	—	—
Rainy	S. by E. 10	Ebb	Dismasted; partial	Nil. £500.	Stress of weather.	No	Sudden squall carried master overboard.	No. C.C. Put into Whitby.
Fine	W. 8.	¼ ebb	Stranded	Nil.	Gale; hugged shore too close.	No	Keeping too close to shore.	No. O.
Thick	S.W. 3	High water	Stranded; got off	Nil.	Mistook Runswick Furnace for Whitby Light.	No	Mistaking lights during fog.	No. C.C.
Stormy	S.E. by S. 6	Unknown	Stranded; total	Nil. £600.	Struck on bar; drove behind N. pier and became total loss.	Unknown	Stress of weather	No. C.C.
Clear	E.N.E. 5	High water	Stranded	Nil. £250.	Struck on bar, and drove behind the pier.	—	—	—
Cloudy	S.E. 8	¼ flood	Stranded; total	Nil. £310.	Mistook lights on entering harbour.	—	—	—
Clear	S.E. by S.	High water	Stranded; total	Nil. £1,000.	Struck on bar, lost way, and drove behind pier.	No	Striking bar	Yes; Sunderland.
Bad	S.E. 10	- - -	Leaky; partial	Nil.	Bad weather	- - -	- - - -	Put into Leith.
Cloudy	S.E. 6	½ flood	Struck bar; total	Nil. £1,400.	Mistaking lights, taking bar too soon, struck and became wreck.	No	Struck by a sea; rudder broke, and vessel unmanageable.	Yes; Shields. C.C.
Stormy	E.S.E. 5.	2½ hours' flood	Stranded; total	Nil. £800.	Stress of weather; missed stays.	Unknown	- - - -	Yes; Hartlepool. O.
Clear	E.S.E. 8.	Young ebb	Stranded; total	Nil.	Sprung a leak; ran ashore to save life.	No	Made for Whitby; not sufficient water; ran for shore.	Yes; Whitby M. or O.
Cloudy	E.S.E. 9.	Near high water.	Stranded; got off	Nil.	Stress of weather; running into Hartlepool for shelter, got on sands.	Yes; Bridlington	Shipped sea; got leaky; ran for harbour of safety; struck Hartlepool bar, and became unmanageable.	Yes; Filey. O.
Squally	E.S.E. 9.	High water	Stranded; total	Nil. £1,200.	Leaky at sea; struck bar in entering harbour.	Yes; Flamborough Head.	Struck by heavy sea.	Yes; Filey. R.W.
Cloudy	E.N.E. 9.	½ ebb	Stranded; total	Nil.	Stress of weather.	—	—	—
Stormy	E.S.E. 9.	High water	Stranded; total	Nil. £9,000.	Struck bar.	—	—	—
Squally	S.E. 8	- - -	Stranded; total	Nil.	Getting into Hartlepool disabled, struck on bar.	—	—	—
Stormy	E.S.E. 9.	High water	Stranded; total	Nil. £9,000.	Struck on bar and drove behind rocks.	—	Running into harbour for shelter without pilot.	—
Thick snow squall.	- -	½ flood	Stranded; total	Nil. £1,250.	Struck rock S. of Scarborough.	—	—	—
Squally	E.N.E. 9.	¼ ebb	Stranded; total	Nil. £2,000.	Struck on bar running in leaky.	—	—	—
Rain	E.S.E. 5.	- - -	Foundered; total	6	Supposed to have foundered, washed up on sands.	—	—	—
Bad	E. 10	High water	Stranded; total	Nil. £1,200	Bad weather.	—	—	—
- - -	E. 10	High water	Stranded; got off	Nil.	Running for shelter, struck harbour.	No	Laden vessel and stormy weather.	No.
Rainy	S.E. 5	High water	Foundered; raised	Nil.	Struck on edge of bank while being towed out.	—	—	—
- -	E.S.E. 6.	- - -	Abandoned; total	—	—	—	—	—
Thick	E.S.E. 6.	High water, ½ flood.	Stranded; got off	Nil. £200.	Mistook Sunderland Light for Hartlepool Heugh.	No	Past port bound to; mistook buoy on Redcar Rocks for Sunderland Ballast Buoy.	No. M.
Thick	E. 1	High water	Stranded	Nil. £1,000.	Ran ashore in thick weather.	—	—	—

Vessels in Distress on the East Coast of England, betw

Name of Ship. 1	Port of Registry (if British). 2	Port sailed from. 3	Date of sailing. 4	Hour of sailing. 5	Weather at Time of sailing. 6	Wind at Time of sailing. 7	Tide Stream at Time of sailing. 8	Port bound to. 9	Whether in Ballast or with Cargo. Ballast. 10	Whether in Ballast or with Cargo. Cargo. 11	Exact Spot where Casualty happened. 12
(228) Newark - - Brig—96—5. (Age unknown.)	Hull - -	London -	26 Mar.	- -	Unknown -	- -	- - -	Newcastle -	Ballast	- -	Herd Sand -
(229) Trio - - Schooner—44—3. (Age unknown.)	Lynn - -	Lynn - -	4 April	3 30 P.M.	Fine; moderate.	S.S.E.	Flood - -	Newcastle -	- -	Flour	Herd Sand -
(230) Isabella - Schooner—82—4. (19 years.)	Newcastle -	St. Osyth -	29 Mar.	- -	- - -	- -	- - -	Sunderland -	- -	Timber	Behind S. pier Sunderland.
(231) Catherine - Brig—160—7. (27 years.)	Ipswich - -	Ipswich - -	- -	- -	- - -	- -	- - -	Sunderland -	Ballast	- -	Sunderland Bay.
(232) Hero - - Snow—208—8. (20 years.)	Sunderland -	Sunderland -	15 April	5 15 A.M.	Fine - -	W.N.W. Fresh.	High water -	Bordeaux -	- -	Coals	Sunderland
(233) Diamond - Sloop—45—3. (31 years.)	Goole - -	Middlesbrough	- -	- -	- - -	- -	- - -	London -	- -	Iron	6 miles of Flamborough Head.
(234) Jantina - - Galiot—57—4. (7 years.)	Groningen -	Newcastle -	- -	- -	- - -	- -	- - -	Groningen -	- -	Coals	25 miles N.E. of Scarborough.
(235) Don - - Schooner—114—5. (15 years.)	Seaham -	London -	- -	- -	- - -	- -	- - -	Seaham -	Ballast	- -	Pier Ex. Sunderland.
(236) Mermaid - Schooner—22—2. (Age unknown.)	Lynn - -	Wisbeach -	29 July	Noon	Fine - -	S.E. 2	High water -	Newcastle -	- -	Marine Stores.	Sea, 7 miles of Whitby.
(237) Lizzie - - Schooner—79—3. (16 years.)	Sunderland -	London -	1 Aug.	- -	Fine - -	S.W.	Ebb tide -	Sunderland -	Ballast	- -	High Water, 7 miles N. of Scarborough.
(238) Vigilant - - Brig—149—6. (Age unknown.)	Seaham -	Seaham -	5 Aug.	12 30 P.M.	Blowing strong	N.E.by E.	- - -	London -	- -	Coals	Off Flamborough Head.
(239) Nautilus - Schooner—68—5. (9 years.)	Lynn - -	Shields -	6 Aug.	2 P.M.	Fine - -	N.E. 2	½ flood -	Lynn - -	- -	Coals	10 miles of Whitby.
(240) Pallion Hall - Brig—133—6. (17 years.)	Sunderland -	Sunderland -	6 Aug.	- -	Fresh - -	N.E.	- - -	Boulogne -	- -	Coal for gas.	Off Robin Hood's Bay.
(241) Isabella - - Brig—129—6. (48 years.)	Whitby - -	Newcastle -	- -	- -	- - -	- -	- - -	London - -	- -	Coals	Church Kerns, Whitby.
(242) Eupatoria, - S.S.—34—16. (Age unknown.)	London -	Shields -	15 Aug.	11 A.M.	Foggy - -	S.E. moderate.	Ebb - -	French Port -	- -	Coals	Flamborough Head.
(243) Camolla - - Sloop—47—4. (42 years.)	Dundee -	Sunderland -	20 Aug.	2 A.M.	Clear - -	W.N.W. 5.	2 or 2½ knots	Dundee -	- -	Coals	10 miles N.E. of Blyth.
(244) Hebe - - Schooner—124—5. (22 years.)	Yarmouth -	Middlesbrough	- -	- -	Good - -	N.E.	- - -	Dordt - -	- -	Iron	N. Town Redcar, miles.
(245) Brothers - - Brig—174—6. (58 years.)	Sunderland -	Sunderland -	22 Aug.	4 P.M.	Fin - -	S.E.	4 hours' flood	Harburgh -	- -	Coals	N. Pier, Sunderland.
(246) Harriett - S. S.—401—18. (Age unknown.)	Newcastle -	Middlesbrough	27 Aug.	- -	Fresh - -	N.N.W.	- - -	Stettin -	- -	Iron	55 miles from Hartlepool.
(247) John - - Sloop—41—4. (16 years.)	Hull - -	Wisbeach -	- -	- -	- - -	- -	- - -	Newcastle -	- -	Wheat	10 miles N. of Flamborough Head.
(248) Prince of Wales Schooner—63—4. (16 years.)	Port Madoc -	Aberdeen -	18 Sept.	10 A.M.	Clear - -	N.N.E. 5	High water -	Shields - -	Ballast	- -	Herd Sand -
(249) Lessing - - Brig—320—12. (Age unknown.)	Rostock -	Tyne - -	- -	- -	- - -	- -	- - -	Swinemunde -	- -	Coals	South Shields
(250) Robert - - Sloop—12—2. (Age unknown.)	Shields -	Whitby -	7 Oct.	- -	- - -	S.E.	- - -	Newcastle -	- -	Iron	Off Huntcliff.
(251) Velocity - Brig—288—8. (8 years.)	Sunderland -	Hamburgh -	14 Oct.	8 A.M.	Fine - -	Variable S.	Last ¼ ebb -	Sunderland -	Ballast	- -	N. of Boulmer Bridge.
(252) Runcinia - Schooner—74—3. (17 years.)	Whitby -	Whitby -	19 Oct.	5 A.M.	Fine - -	S.W. 5	Spring tide -	Tyne - -	- -	Ironstone	Philitail rocks
(253) Magna Charta - Barque—357—12. (10 years.)	Shields -	Shields -	21 Oct.	- -	Hazy - -	N.W. 3	- - -	Brake - -	-	Coals	Mouth Shields Harbour.
(254) Traveller - Brig—113—6. (Age unknown.)	Whitby -	Seaham -	21 Oct.	3 30 P.M.	Fine - -	W.N.W.	Young flood -	Lynn - -	- -	Coals	Rocks near Whitby.
(255) Burgomeister - Schooner—258—8. (Age unknown.)	Orone, Prussia	Dantzic -	- -	- -	- - -	- -	- - -	Sunderland -	- -	Timber	Whitburn Steel
(256) George Fyffe - Barque—480—15. (17 years.)	Newcastle -	Quebec -	- -	- -	- - -	- -	- - -	Shields -	- -	Timber	Herd Sand -

slands and Flamborough Head, in 1857—*continued.*

Weather at Time of Casualty. 15	Wind at Time of Casualty. 16	Tide at Time of Casualty. 17	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18	Lives lost. 19	Circumstances which caused the Casualty. 20	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21	State any Particulars that can throw light on the Cause of the Casualty. 22	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23
Fog	E.S.E. 4.	½ flood	Stranded; got off	Nil.	Whilst being towed in, heavy sea struck her, and tow rope was cast off.	- - -	Steam tug let go tow rope, and she went ashore.	—
Hasy	S.E. 2	High water	Stranded; got off	Nil.	Sea struck her when crossing bar.	No	Wind dropped near buoy of the Herd; became unmanageable.	No. M.
Thick	E.S.E. 6.	High water	Stranded	Nil.	Struck by sea while taking harbour.	—	—	—
Thick fog	5.	2 hours from high water.	Stranded	Nil. £400.	Stress of weather; dragged anchor.	—	—	—
Fine	W.N.W. 6.	High water	Stranded; got off	Nil. £350.	Not sufficient water, through sea getting up.	No	Sea getting up, caused a scud on bar; between seas not water enough for ship without striking.	Yes. Hendon Bay. O.
Thick	E. by S. 2.	¾ flood	Leaky; partial	Nil.	Struck on sunken wreck	- - -	- - - -	Put into Bridlington,
Clear	N.E. 6	- - -	Foundered; total	Nil. £330.	Lee board got under vessel's bottom and stove her.	—	—	—
Cloudy	E.N.E. 6.	- - -	Struck pier	Nil. £50.	—	—	—	—
Fine	W.N.W. 5.	2 hours after high water.	Foundered; total	Nil. £60.	Leak	No	Strong wind during previous night.	No. M. and O.
Clear	N.E. 2	Ebb	Stranded; total	Nil.	Too close to shore; anchored, and cables parted.	Yes. Higham Wyke.	- - - -	No. M. and O.
N.E. by E. strong.	N.E. by E. strong.	- - -	Leaky; partial	Nil.	Stress of weather	- - -	Leaky off Flambro' Head; made for Bridlington Harbour to save crew and ship.	—
Squally	N.E. 7	¼ flood	Foundered; total	Nil. £600.	Leaky	No	Sprung a leak, and went down in half an hour.	No. One of the Crew.
Thick	N.E. 7	- - -	Explosion; total	Nil. £800.	Gas from coal ignited, and blew vessel up.	—	—	—
Thick	S. by E. 5.	High water	Foundered; total	Nil.	Too near land in thick weather.	No	Error in judgment.	—
Hasy	N.N.W. 5.	Ebb	Stranded; total	Nil.	Full speed; dense fog; no lead.	No	Sufficient allowance not being made for the indraft of the ebb tide.	No. O.
Thick	N.N.E. 5	Spring	Foundered; total	Nil. £235.	Stress of weather	No	Sprung a leak at midnight, and sank 3 hours after.	No.
Thick, hasy	S.E. 4	¾ flood	Stranded; total	Nil. £600.	Thick weather.	—	—	—
Fine	S.E. 4	High water	Stranded; got off	Nil.	Stress of weather; struck the pier when running for harbour; disabled.	No	Vessel laboured heavily, rolled masts away, and struck pier.	Yes. Sunderland. M.
Clear	N.N.W. 5.	- - -	Dismasted; partial	Nil.	Rotten foremast giving way.	- - -	- - - -	Put into 'Hartlepool damaged.
Cloudy	N.N.E. 6.	- - -	Leaky; partial	Nil.	Heavy sea	- - -	Sprung a leak in heavy sea.	Assisted into Bridlington.
Clear	N.N.W. 1	½ ebb	Stranded; got off	Nil.	Tow rope broke while being towed out.	No	Heavy sea, on bar, giving way tow rope.	—
- - -	- -	- - -	Explosion	Nil. £553.	Exploded 8 hours after loading.	No.	—	—
- - -	S.E. 7	- - -	Foundered; total	Nil.	Stress of weather	- - -	Masts carried away, &c.	—
Thick	S.S.W. 4	1 hour ebb	Stranded; got off	Nil.	Stood in for land, thick weather, no lead hove.	No; but driven out of her course 40 miles N. of destination.	Strong S.S.W. and hazy weather, drove her ashore.	No. O.
Fine	S.W. 5	½ ebb	Stranded; got off	Nil.	Stood too near land; vessel too much by the head.	No	- - - -	No. C.C. Put into Whitby.
Hazy	N.W. 3	High water	Stranded; got off	Nil.	Got out of proper channel when leaving the port.	- - -	Would not answer helm.	—
Fine	N.N.W. 6	½ flood	Stranded; total	Nil. £800.	Steering too near land	No	Carelessness of master	No. C.C.
Hazy	N.E. 5	- - -	Stranded	Nil.	Carelessness of Pilot.	—	—	—
Hazy	N.E. 5	½ hour of High water.	Stranded	Nil. £400.	Got to southward by mismanagement of pilot; wind drove her on sand.	—	—	—

Vessels in distress on the EAST COAST of ENGLAND, being

Name of Ship. 1	Port of Registry (if British). 2	Port sailed from. 3	Date of sailing. 4	Hour of sailing. 5	Weather at Time of sailing. 6	Wind at Time of sailing. 7	Tide Stream at Time of sailing. 8	Port bound to. 9	Whether in Ballast or with Cargo.		Exact Spot where Casualty happened. 12
									Ballast. 10	Cargo. 11	
(257) Anna Margaretna. Schooner—50—5. (Age unknown.)	Leith	Leith	3 Nov.	4 P.M.	Clear	W.	-	Bordeaux	-	Coals	16 miles S.E. of Hartlepool Heugh
(258) Tyne Smack—40—3. (7 months.)	Newcastle	Shields	15 Nov.	-	-	-	-	Scarborough	Ballast	-	Herd Sand
(259) Unicorn Schooner—118—6. (13 years.)	Scarborough	Warkworth	14 Nov.	2 30 P.M.	Fine	N.E.	Flood	Holland	-	Coals	20 miles [illegible] Whitby.
(260) Heroine Brig—182—6. (17 years.)	Montrose	Sunderland	17 Nov.	3 30 P.M.	Fine	S. by E. 5.	Nearly high-water.	Montrose	-	Coals	Sunderland [illegible]
(261) Jenny Schooner—123—5. (Age unknown.)	Whitby	Hartlepool	21 Nov.	6 A.M.	Fine	W.	-	London	-	Coals	Off [illegible]
(262) Kingston Brig—224—8. (22 years.)	Hartlepool	London	19 Nov.	2 P.M.	Light breeze	S.W. 2.	Flood	Hartlepool	Ballast	-	Redcar [illegible]
(263) Active Schooner—79—6. (Age unknown.)	St. Servan	Dunkerque	-	-	-	-	-	Sunderland	Ballast	-	S. [illegible] Flamborough Head
(264) Industry Smack—36—5. (Age unknown.)	Grimsby	Grimsby	4 Dec.	Midnight	Fine	W.S.W.	-	Scarborough	-	Fish	Abreast [illegible] Filey.
(265) Jaffer Elligonda Galiot—83—5. (20 years.)	Pekela	Newcastle	-	-	-	-	-	Rotterdam	-	Coals	Newbiggin
(266) Hope Schooner—68—4. (7 years.)	Goole	London	15 Dec.	3 30 A.M.	Fine	W.	¼ ebb	Newcastle	-	Iron	Seaton [illegible]

N.B.—Since the completion of the above Return, reports have been

1. Unanimity, supposed to have foundered off Hartlepool, on 4th January 1857 ; all hands lost.
2. Duchess of Northumberland, supposed to have foundered off Hartlepool, on 4th January 1857 ;

lands and Flamborough Head, in 1857—*continued.*

Weather at Time of Casualty. 15	Wind at Time of Casualty. 16	Tide at Time of Casualty. 17	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18	Lives lost. 19	Circumstances which caused the Casualty. 20	Was the Vessel driven back? and, if so, how far had she reached Southward or Northward on her Voyage? 21	State the Particulars that can throw light on the Cause of the Casualty. 22	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23
Dark - -	S.E. 6	½ flood -	Foundered; total -	Nil.	Sprung a leak, which could not be kept under.	No - - -	- - - -	No. M.
Fine - -	E.N.E. 5	Low water -	Stranded; total -	Nil.	Breaking of tow-rope.	—	—	—
Clear - -	E.N.E. 5	½ ebb - -	Foundered; total -	Nil. £876.	Imperfect repairs and stress of weather.	No - - -	Sprung a leak - -	No. O.
Hazy - -	E.S.E. 5	Nearly high water.	Stranded; got off -	Nil. £130.	Took ground while being towed out.	- - -	Struck before reaching bar.	No. C.C.
Fine - -	W. 9	- - -	Leaky; partial - -	Nil.	Sprung a leak - -	No - - -	- - - -	No. Got into Scarborough for repair. C.C.
Thick - -	S.W. 9	½ flood -	Stranded; total -	Nil. £1,000.	No lead nor look out -	- - -	Want of proper look-out. Wind S.W. Weather clear.	No. C.C.
Cloudy - -	N.W. 6	- - -	Stranded - - -	Nil.	Too close to land; sudden change of wind.	—	—	—
Fog - -	W.S.W. 2.	High water -	Stranded - - -	Nil.	Inattention in a thick fog.	—	—	—
Hazy - -	S.W. 6	- - -	Stranded; total -	Nil. £400.	Sprung a leak in bad weather. Run ashore to save life.	—	—	—
Hazy - -	W.S.W. 5.	High water -	Stranded; got off -	Nil. £210.	Stood in too close; ignorance of coast.	- - -	Thick weather - -	No. C.C.

he Information contained in Column 23 of this Return has been chiefly obtained from the Owners and Masters of Vessels, by the Collector of Customs at the Port of Registry named in Column 2:—M. denotes that the Place rted is named by the Master, O. by the Owner, C.C. by the Collector of Customs, and R.W. by the Receiver of ck. In some cases, C.C. is inserted when the Collector obtaining the Information has not stated by whom Place named is recommended.

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rd of Trade relating to the loss of the four vessels named below:—

idship, supposed to have foundered off Hartlepool, on 4th January 1857; all hands lost.

e Louise, lost off Redcar, on the 5th January 1857; crew saved.

SUMMARY

OF THE

PRECEDING RETURN OF VESSELS IN DISTRESS (OTHERWISE THAN BY COLLISION)

ON THE

EAST COAST OF ENGLAND,

DURING THE YEARS 1856 AND 1857.

TABLE 1.—Wrecks and Casualties, distinguishing Total from Partial Losses, and Vessels with Cargoes from Vessels in Ballast; and further distinguishing Colliers in Ballast from other Vessels in Ballast.

Casualties resulting in **total** losses; viz:—			
To Vessels in ballast	Colliers - - 39 other Vessels - 3	42	
To Vessels with cargoes		69	
To Vessels whether with cargoes or in ballast, unknown		4	
			115
Casualties resulting in **partial** losses:—			
To Vessels in ballast (Colliers)		59	
To Vessels with cargoes		64	
To Vessels whether with cargoes or in ballast, unknown		1	
			124
Casualties, whether resulting in total or partial loss unknown:—			
To Vessels in ballast (Colliers)		13	
To Vessels with cargoes		14	
To Vessels whether in cargo or in ballast, unknown		0	
			*27
Total casualties			266

Loaded vessels, 147; Vessels in ballast, 114; Unknown, †5; Total, 266.

* These 27 Vessels are appropriated, in Table 6, as 14 partial losses and 13 total losses.

† These 5 Vessels are apportioned, in Tables 5 and 6, as 3 loaded and 2 in ballast.

TABLE 2.—Wrecks and Casualties, arranged according to the Places at or near to which they happened; and also according to Districts; and showing the Number in the Return under which each Casualty is to be found.

PLACES.

Amble, 134. 171. 182. 194. 201.	5
Bamborough, 125. 144.	2
Blyth, 2. 4. 148. 243.	4
Bondicar, 57.	1
Boulmer, 203. 251.	2
Burcam Reef, 74.	1
Castle Eden Dene, 145.	1
Cullercoats, 156. 199.	2
Dunstanborough, 143.	1
Farn Islands, 29. 86. 105. 162. 167. 195.	6
Filey, 76. 111. 126. 264.	4
Flamborough Head, 31. 59. 60. 90. 96. 123. 242. 263.	8
Hartlepool, 11. 35. 36. 73. 103. 109. 112. 116. 117. 132. 136. 137. 142. 154. 155. 160. 161. 163. 168. 170. 174. 181. 187. 213. 214. 217. 221.	27
Hauxley, 64.	1
Hendon Mill, 129.	1
Carried forward	66
Brought forward	66
Hole Wyke, 28.	1
Hudson Scar, 152. 190.	2
Huntcliffe, 250.	1
Long Scar, 131. 151.	2
Marsden, 222.	1
Marske, 27. 135.	2
Middlesborough, 178.	1
Newbiggen, 95. 110. 265.	3
Newcastle, 33.	1
Redcar, 52. 56. 63, 75. 93. 94. 97. 98. 106. 128. 172. 244. 262.	13
Robin Hood's Bay, 19. 67. 120. 121. 153.	5
Runswick Bay, 118. 119.	2
Scarborough, 8. 20. 37. 79. 83. 89. 122. 124. 139. 140. 141. 150. 175. 219. 223. 227. 237.	17
Seaham, 45. 49. 51. 91. 92. 130. 146. 189.	8
Seaton Carew, 47, 69. 78. 113. 149. 165. 191. 211. 266.	9
Carried forward	134

TABLE 2—*continued.*

Brought forward	134
Shields, 24. 25. 30. 40. 53. 71. 87. 88. 84. 80. 99. 101. 176. 177. 197. 210. 224. 228. 229. 248. 249. 253. 256. 258.	24
Souter Point, 157.	1
Sunderland, 1. 3. 5. 13. 14. 34. 38. 39. 42. 43. 44. 48. 70. 81. 82. 85. 100. 133. 138. 166. 183. 184. 185. 196. 205. 206. 208. 215. 216. 218. 220. 226. 230. 231. 232. 235. 245. 260.	38
Tees Bar and Bay, 32. 41. 54. 108. 158.	5
Tynemouth, 173.	1
Warkworth, 72.	1
Whitburn Steel, 68. 255.	2
Whitby, 6. 12. 18. 55. 65. 102. 114. 115. 127. 147. 159. 169. 193. 204. 207. 212. 241. 252. 254.	19
Carried forward	225

Brought forward	225
At Sea.	
Off Flamborough Head, 7. 9. 10. 26. 50. 192. 202. 209. 233. 238. 247..261.	12
„ Filey, 58. 62.	2
„ Hartlepool, 61. 186. 246. 257.	4
„ Robin Hood's Bay, 240.	1
„ Scarborough, 23. 234.	2
„ Stockton, 104.	1
„ Sunderland, 21. 77.	2
„ Sunderland Point, 107.	1
„ Tynemouth, 15. 225.	2
„ Whitby, 17. 46. 180. 188. 198. 236. 239. 259.	8
Bearings not stated, 22. 66. 164. 179. 200	5
Scarborough and Sunderland (between), 16.	1
Total	266

DISTRICTS.

1. From the Farn Islands to Whitburn, 2. 4. 15. 22. 24. 25. 29. 30. 33. 40. 53. 57. 64. 71. 72. 74. 80. 84. 86. 87. 95. 99. 101. 105. 107. 110. 125. 134. 143. 144. 148. 152. 156. 162. 167. 171. 173. 176. 177. *179. 182. 190. 194. 195. 197. 199. 201. 203. 210. 224. 225. 228. 229. 243. 248. 249. 251. 253. 256. 258. 265.	61
2. From Whitburn to Huntley Foot, 1. 8. 5. 11. 13. 14. 16. 21. 27. 28. 32. 34. 35. 36. 38. 39. 41. 42. 43. 44. 45. 47. 48. 49. 51. 52. 54. 56. 61. 63. 68. 69. 70. 73. 75. 77. 78. 81. 82. 85. 88. 91. 92. 93. 94. 97. 98. 100. 103. 104. 106. 108. 109. 112. 113. 116. 117. 128. 129. 130. 131. 132. 133. 135. 136. 137. 138. 142. 145. 146. 149. 151. 154. 155. 157. 158. 160. 161. 163. 165. 166. 168. 170. 172. 174. 178. 181. 183. 184. 185. 187. 189. 191. 196. 200. 205. 206. 208. 211. 213. 214. 215. 216. 217. 218. 220. 221. 222. 226. 230. 231. 232. 235. 244. 245. 246. 250. 255. 257. 260. 262. 266.	122
3. From Huntley Foot to Flamborough Head, 6. 7. 8. 9. 10. 12. 17. 18. 19. 20. 23. 26. 31. 37. 46. 50. 55. 58. 59. 60. 62. 65. 66. 67. 76. 79. 83. 89. 90. 96. 102. 111. 114. 115. 118. 119. 120. 121. 122. 123. 124. 126. 127. 139. 140. 141. 147. 150. 153. 159. 164. 169. 175. 180. 186. 188. 192. 193. 198. 202. 204. 207. 209. 212. 219. 223. 227. 233. 234. 236. 237. 238. 239. 240. 241. 242. 247. 252. 254. 259. 261. 263. 264.	83
TOTAL	266

TABLE 3.—Wrecks and Casualties, showing the Nature of the Casualties.

Abandoned at sea from various causes		7
Burnt (fire caused by a cargo of lime getting wet)		1
Capsized		4
Damaged on piers or bars through insufficiency of tugs or tow ropes		13
Explosions from coal gas generated under hatches		4
Foundered at sea and at anchors from various causes		36
Leaky, or dismasted and otherwise crippled (put back to repair)		22
Stranded or struck on rocks, bars, and piers in entering or leaving ports and harbours, viz.:—		
Blyth	1	
Hartlepool	12	
Hauxley	1	
Herd Sand	5	
Seaham	3	
Scarborough	3	
Shields	3	
Sunderland	27	
Whitby	3	
		58
Stranded or struck on rocks and sands from various causes		119
Struck on sunken wreck		2
Total		266

TABLE 4.—Wrecks and Casualties occasioning Loss of Life; distinguishing Loaded Vessels from Vessels in Ballast, and showing the Description of each Vessel and Cargo, the Number of Lives Lost and Saved in each Case, and the Date and Place of each Casualty.

(*a*) LOADED VESSELS:

No. in Return.	Name of Ship and Age if known.	Rig.	Tons.	Men.	Cargo.	Loss on Property, whether total or partial.	No. of Lives lost.	Date of Casualty.	Place.
46	Eugenie, 14 years	Schooner	150	5	Coals	Total	4	1856 : 26 April	15 m. from Whitby.
56	Brothers	Coble	7	3	Fish	Do.	1	8 July	Redcar.
65	Ann	Sloop	15	2	Coals	Do.	1	18 Sept.	Whitby.
105	Flying Dutchman	Brig	166	8	Coals	Do.	8	26 Dec.	Fern Island.
109	Duke, 15 years	Brig	134	6	Coals	—	1	1857 : 4 Jan.	Hartlepool.
110	Enterprise	Schooner	106	7	Coals	Do.	7	4 „	Newbiggen.
118	Amelia	Brig	237	10	Coals	Do.	10	4 „	Runswick Bay.
119	Peter and Mary	Schooner	78	4	Coals	Do.	4	4 „	Ditto.
121	Mary and Ann, 20 years	Schooner	10	4	Coals	Do.	4	4 „	Robin Hood's Bay.
125	Harmonie, 14 years	Barque	210	13	Salt	Do.	1	4 „	Bamburgh Castle.
140	Eurus, 22 years	Brig	272	11	Coals	Do.	4	4 „	Scarborough.
141	Wilsons, 20 years	Brig	227	9	Coals	Do.	1	4 „	Ditto.
143	Epsilon	Brig	210	8	Coals	Do.	8	4 „	Dunstanborough Castle.
156	Reform	Schooner	90	5	Iron	Do.	5	4 „	Cullercoats.
157	Aurora, 3 years	Sloop	51	4	Linseed	Partial	4	4 „	Souter Point.
158	Will. Alexander, 20 years	Brig	191	7	Coals	Total	7	4 „	Tees' Mouth.
164	Perseverance	Brig	299	11	Coals	Do.	4	4 „	East Coast, and Kilnsea Beach.
168	Duke, 15 years	Brig	134	6	Coals	—	1	4 „	Middleton Sands.
175	Samuel Cunard, 17 years	Barque	206	10	Timber	Total	1	6 „	Scarborough.
179	Ariel, 18 years	Brig	280	11	Wood	Do.	11	14 „	At Sea.
187	St. Lawrence, 37 years	Brig	277	10	Salt	Do.	10	26 „	Hartlepool.
197*	Prince Philip, 7 years	Barque	223	10	Coals	—	1	20 Feb.	Brandlington Drop, Shields.
	22 Vessels		3,573	164	Total Losses Partial Losses Unknown	18 1 3	98		

* The loss in this case was occasioned by the explosion of coal gas generated under hatches.

(*b*) VESSELS IN BALLAST:

No. in Return.	Name and Age (if known) of Ship.	Rig.	Tons.	Men.	Colliers in Ballast marked C, other Vessels B.	Loss on Property, whether total or partial.	Lives lost.	Date of Casualty.	Place.
22	Margaret, 10 years	Schooner	72	5	C	Total	5	1856. 7 Feb.	East Coast.
44	William	Coble	20	6	B	Do.	1	5 April.	South Dock, Sunderland.
131	Empress, 16 years	Brig	287	10	C	Do.	6	1857. 4 Jan.	Long Scar Rocks.
136	Honour, 53 years	Brig	154	7	C	Do.	7	4 „	Hartlepool Heugh.
137	John Baker, 40 years	Brig	123	7	C	Do.	7	4 „	Off Hartlepool.
145	Era, 16 years	Brig	192	9	C	Do.	1	4 „	Castle Eden.
154	Mary, 15 years	Schooner	231	7	C	Do.	2	4 „	Hartlepool Light.
177	Sarah Ellen, 17 years	Brig	195	7	C	—	1	9 „	Herd Sand.
	8 Vessels		1274	58	Total Losses Unknown	7 1	30		

(*c*)* VESSELS, WHETHER LOADED OR IN BALLAST UNKNOWN:

No. in Return.	Name and Age of Ship, when known.	Rig.	Tons.	Men.	Ballast or Cargo.	Loss on Property.	No. of Lives lost.	Date of Casualty.	Place.
151	Unknown	Schooner	100	6	Unknown.	Total	6	1857. 4 Jan.	Near the Long Scar Buoy.
221	Unknown	Galliot	say 100	6	Unknown.	Do.	6	26 Mar.	Hartlepool.
	2 Vessels		200	12	Total Losses	2	12		

* *Note.*—In Tables 5 and 6, one of these Vessels is included in the Loaded Vessels, and the other in the Vessels in Ballast.

TABLE 5.—Wrecks and Casualties, showing the Total Tonnage of the Vessels and the Total Number of Hands on Board: and distinguishing Loaded Vessels from Vessels in Ballast; the Number of Hands employed, and the Number of Lives Saved and Lost in each case; and Casualties occasioning Loss of Life from other Casualties.

	Casualties occasioning Loss of Life.					Casualties not occasioning Loss of Life.			Total.				
	No. of Casualties.	Tonnage of Vessels.	Lives Lost.	Lives Saved.	Hands employed.	No. of Casualties.	Tonnage of Vessels.	Hands employed.	No. of Casualties.	Tonnage of Vessels.	Lives Lost.	Lives Saved.	Hands employed.
Loaded Vessels	23	3,673	104	66	170	128	18,503	897	151	22,176	104	963	1,067
Vessels in Ballast.	9	1,374	36	28	64	106	18,464	777	115	19,838	36	805	841
Total of Loaded Vessels and Vessels in Ballast.	32	5,047	140	94	234	234	36,967	1,674	266	42,014	140	1,768	1,908

See Notes to Table No. 1.

TABLE 6.—PER-CENTAGES.

	Proportion per Cent. that—				
	Casualties to **Loaded** Vessels and Vessels in **Ballast** respectively, bear to the whole Number of Casualties.	Casualties occasioning **Total Losses** bear to the whole Number of Casualties.	Casualties occasioning **Partial Losses** bear to the whole Number of Casualties.	Casualties occasioning **Loss of Life** bear to the whole Number of Casualties.	**Lives Lost** bear to the whole Number of Hands on board.
Loaded Vessels	56·8	60·2	52·2	15·4	9·75
Vessels in Ballast	43·2	39·8	47·8	7·7	4·3
Total of Loaded Vessels and Vessels in Ballast.	—	48·1	51·9	12·	7·3

See Notes to Table No. 1.

TABLE 7.—Wrecks and Casualties, showing the Cargoes of the Ships.

Bricks		1
Coals and Coke		100
Fish and Fishing Nets		4
General		5
Grain, Oatmeal, &c.		7
Iron and Ironstone		12
Lime		1
Potatoes		2
Salt		3
Stone		1
Timber		11
Vessels with Cargoes		147
Vessels in Ballast	114	
Whether with Cargoes or in Ballast unknown	5	
		119
Total		266

TABLE 8.—Wrecks and Casualties, showing the Vessels referred to in the Return annexed, arranged according to the Rig, Tonnage, and Number of Hands on Board.

Rig.		Tonnage.		Hands.	
Barques	21	60 and under	38 vessels.	With 5 and under	88 vessels.
Brigs	121	100 and under	55 „	„ 10 and under	149 „
Brigantines	2	200 and under	92 „	„ 15 and under	20 „
Cobles	2	300 and under	65 „	„ 20 and under	4 „
Galliotts	6	400 and under	7 „	„ 25 and under	4 „
Ketches	1	500 and under	5 „	Unknown	1 „
Luggers	2	600 and under	1 „		
Schooners	76	700 and under	2 „		
Sloops	18	Unknown	1 „		
Smacks	6				
Snows	2				
Steamers (Tugs 3)	8				
Unknown	1				
Total Ships	266	Total	266	Total	266 „

TABLE 9.—Wrecks and Casualties, showing the Direction and Force of the Wind at the Tim each Casualty happened, and the Number of Casualties which happened in each Mont and at each Degree of Force.

Direction of Wind.

Direction of Wind.	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		Totals.		Grand Total 1856-1857.	Direction of Wind.
	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.		
N. -	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	2	.	1	.	5	1	6	N.
N.N.E. -	.	.	1	.	.	.	.	.	.	.	.	.	2	.	1	1	1	1	1	.	2	.	.	.	8	2	10	N.N.E.
N. by E. -	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	N. by E.
N.E. by N.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	N.E. by N.
N.E. -	2	.	1	1	1	.	1	.	.	.	.	.	2	1	.	3	.	.	.	1	2	1	4	.	13	7	20	N.E.
N.E. by E.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1	1	N.E. by N.
E. by N. -	.	11	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	11	11	E. by N.
E.N.E. -	2	35	.	.	.	3	2	.	2	.	.	1	.	.	.	.	.	.	.	.	3	2	.	.	9	41	50	E.N.E.
E. -	.	22	.	.	.	2	.	1	1	.	.	.	.	.	2	.	1	.	.		.	.	1	.	5	25	30	E.
E.S.E. -	.	2	.	.	1	7	1	4	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	2	14	16	E.S.E.
E. by S. -	.	2	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	3	4	S. by E.
S.E. by E.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	S.E. by E.
S.E. -	.	.	.	1	2	5	1	1	.	.	.	.	.	.	.	2	.	.	1	1	.	1	.	.	4	11	15	S.E.
S.E. by S.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	2	3	S.E. by S.
S.S.E. -	2	.	.	1	1	1	3	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	8	2	10	S.S.E.
S. by E. -	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	2	2	S. by E.
S. -	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	2	S.
S.S.W. -	2	.	1	1	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	1	.	.	.	.	5	2	7	S.S.W.
S. by W. -	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	1	S. by W.
S.W. by S.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	S.W. by S.
S.W. -	1	1	4	2	.	1	.	.	.	.	.	.	.	.	1	.	.	.	.	1	.	1	2	1	8	7	15	S.W.
W.S.W. -	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	5	2	8	2	10	W.S.W.
W. -	.	.	2	1	.	2	.	.	.	.	.	.	.	.	1	.	1	.	1	.	1	1	3	.	9	4	13	W.
W.N.W. -	.	2	3	.	.	.	.	1	.	.	1	.	.	1	.	.	.	.	.	.	.	.	2	.	6	4	10	W.N.W.
W. by N. -	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	2	W. by N.
N.W. -	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	2	2	4	N.W.
N.N.W. -	.	1	.	.	1	.	.	.	.	.	.	.	1	.	.	2	1	1	.	1	.	.	1	.	4	5	9	N.N.W.
Variable -	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	2	Variable.
Not stated	.	1	2	2	1	1	.	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	3	6	9	Not stated.
Total -	12	83	20	10	8	25	8	8	3	.	1	2	5	2	6	10	7	3	5	6	11	8	20	3	106	160	266	Total.

Force of Wind.

Force of Wind.	Jan.		Feb.		March.		April.		May.		June.		July.		August.		Sept.		Oct.		Nov.		Dec.		Total.		Grand Total. 1856-7.	Force of Wind.
	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.	1856.	1857.		
0 - -	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	0
1 - -	.	.	.	1	1	.	.	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1	3	4	1
2 - -	1	1	.	1	.	.	.	1	.	.	.	1	.	.	4	1	1	.	.	.	.	.	1	1	7	6	13	2
3 - -	.	.	2	2	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	1	.	4	4	8	3
4 - -	2	.	1	1	2	.	.	1	1	.	1	.	.	.	.	2	.	.	.	1	.	.	1	.	8	5	13	4
5 - -	2	.	.	4	.	7	2	1	.	.	.	.	1	1	.	3	1	.	2	2	1	4	3	1	12	23	35	5
6 - -	1	2	3	.	.	2	5	4	1	.	.	1	.	1	2	.	2	1	2	1	3	2	4	1	23	15	38	6
7 - -	2	2	.	.	1	.	1	.	.	.	.	.	.	.	.	2	.	.	.	1	2	.	3	.	9	5	14	7
8 - -	1	1	.	.	.	4	.	.	1	.	.	.	.	.	.	.	1	.	.	.	.	.	1	.	4	5	9	8
9 - -	1	10	1	.	.	6	.	.	.	.	.	.	2	.	.	.	1	.	1	.	2	2	1	.	9	18	27	9
10 - -	1	38	5	.	.	5	.	.	.	.	.	.	1	.	.	1	.	.	.	.	2	.	1	.	10	44	54	10
11 - -	1	22	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	6	22	28	11
12 - -	.	6	3	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	3	.	7	6	13	12
Unknown	.	1	2	.	4	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	6	3	9	Unknown.
Total -	12	83	20	10	8	26	8	8	3	.	1	2	5	2	6	9	7	3	5	6	11	8	20	3	106	160	266	Total.

TABLE 9—*continued.*

FIGURES to denote the FORCE of the WIND.

0.	Calm.		
1.	Light Airs	Just sufficient to give steerage way.	
2.	Light Breezes	With which a Ship with all Sail set and clean full would go in smooth water.	to 2 knots.
3.	Gentle Breeze		to 4 „
4.	Moderate Breeze		5 to 6 „
5.	Fresh Breeze	In which she could just carry in chase, full and by	Royals, &c.
6.	Strong Breeze		Single Reefs and T.G. Sails.
7.	Moderate Gale		Double Reefs and Jib.
8.	Fresh Gale		Triple Reefs, &c.
9.	Strong Gale		Close Reefs and Courses.
10.	Whole Gale	In which she could just bear close-reefed Main Topsail and reefed Foresail.	
11.	Storm	Under Storm Staysail.	
12.	Hurricane	Under Bare Poles.	

THO^{s} GRAY.

RETURN OF

VESSELS IN DISTRESS

(OTHERWISE THAN BY COLLISION)

ON THE EAST AND NORTH-EAST COASTS OF

SCOTLAND,

FROM CAPE WRATH TO ST. ABB'S HEAD, INCLUDING THE SHETLAND AND ORKNEY ISLANDS;

IRELAND,

FROM ARRANMORE TO CORK INCLUSIVE, AND ON THE COASTS OF ISLAY AND KINTYRE;

THE ISLE OF MAN,

BRISTOL CHANNEL,

FROM ST. DAVID'S HEAD TO THE LAND'S END, INCLUDING THE SCILLY ISLANDS;

EAST COAST OF ENGLAND,

BETWEEN THE FARN ISLANDS AND FLAMBOROUGH HEAD,

During the Years 1856 and 1857.

PART II.—GEOGRAPHICALLY ARRANGED.

COMPILED FOR THE USE OF

THE HARBOURS OF REFUGE COMMISSION,

FROM THE BOARD OF TRADE WRECK REGISTER; AND FROM REPORTS FORWARDED TO THE BOARD OF TRADE BY RECEIVERS OF WRECK, AND OFFICERS OF THE CUSTOMS AND COAST GUARD.

1858-59.

RETURN of VESSELS in DISTRESS on the E. and N.E. COASTS OF SCOTLAND, 1856 & 1857.

Name, Description, and Age of Ship.	Port of Registry (if British).	Port sailed from.	Date of sailing.	Hour of sailing.	Weather at Time of sailing.	Wind at Time of sailing.	Tide at Time of sailing.	Port bound to.	Whether in Ballast or with Cargo.		Exact spot where Casualty happened or Distress occurred.
									Ballast.	Cargo.	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
SEA.											
(19) Axel Waldeman Schooner—97—6. (13 years.)	Tonsberg	Charleston	-	-	-	-	-	Tromsoe	-	Coals	Lat. 61° 30′ N. Long. 1° 17′ W.
(72) Ceres Schooner—88—6. (14 years.)	Inverness	Dantzic	1857. 21 Nov.	-	-	-	-	Dundee	-	Wheat	Lat. 59° 47′ N. Long. 0° 22′ W.
SHETLANDS.											
(34) Brothers Hermaph.—100—6. (28 years.)	Milford	Westport	-	-	-		-	Hartlepool	-	Oats	On Ness [illegible] Hm.
(27) Ballum Schooner—64—5.	Denmark	Iceland	-	-	-	-	-	Copenhagen	-	General	Rocks [illegible] N.E. Point of N. Ronaldshay (Orkney).
(107) Telegraphen Schooner—141—7. (4 years.)	Copenhagen	Dantzic	7 Aug.	-	-	-	-	Londonderry	-	Wheat	Start Point, Sandy, Orkney.
ORKNEYS.											
(105) Hope Ship—880—23.	New York	Newcastle	-	-	-	-	-	New York	-	Coals	Sea, 80 miles from Kirkwall.
(102) European Ship—678—17. (Age unknown.)	New Orleans	Shields	11 July	-	-	-	-	Matanzas	-	Coals	Off Stromness 40 or 50 miles to west of Orkneys.
(114) Brazilian Brig—227—8. (14 years.)	Dundee	Liverpool	28 Aug.	-	-	-	Fair	Narva	-	Salt	Off Stromness
(95) Laurel Schooner—76—7. 3 years.)	Stromness	Leith	17 Jan.	-	-	Fair	-	Stromness	-	General	N. point Isle Burray.
PENTLAND FIRTH.											
(21) Nora (Say—200—12.	Norway	Cronstadt	1856. 23 May	-	-	-	-	Liverpool	-	Cotton and Salt.	Off Cape Wrath.
(41) Traffic Schooner—91—6. (7 years.)	Banff	Sunderland	6 Nov.	-	-	-	-	Thurso	-	Lime	In Scrabster Harbour.
(81) Brothers Smack—29—3. (13 years.)	Wick	Castle Hill Creek, Scrabster	1857. 28 Mar.	10 P.M.	Fine	Calm	-	Leith	-	Oats	Spur of Murkle Scrabster.
(13) Brave Sloop—30—3.	Wick	Scrabster	-	-	-	-	-	Port Soy	-	Stone	¾ mile W. of Dunnett Head Lighthouse.
(28) Ahti Schooner—120—7. (5 years)	Wasa	Liverpool	-	-	-	-	-	Wasa	-	General	Dunnett Head, Caithness.
(3?) Bolette Schooner—88—6. (25 years.)	Drammen	Drammen	-	-	-	-	-	Wick	Ballast	-	St. John's, Dunnett Head, Pentland Firth.
(96) Blue Bonnet Schooner—121—7. (14 months.)	Leith	Lerwick	24 May	-	-	Strong, favourable	-	Scrabster	Ballast	-	S.E. end of Stroma Island.
(100) Paragon Barque—416—14. (15 years.)	Shields	Quebec	21 June	-	-	-	-	Shields	-	Timber	West end of Isle of Stroma.
(101) De 4 Broeders Galliott—100—5. (Age unknown.)	Holland	Liverpool	30 July	-	Fine	-	-	-	-	Salt	Isle of Stroma
(65) Annabella Smack—42—4. (32 years.)	Stornoway	Scrabster	27 Feb.	11 A.M.	-	-	-	Liverpool	-	Potatoes	Pentland Skerries.
(94) Favorite Brig—206—11. (13 years.)	Aberdeen	Aberdeen	19 May	-	-	-	-	Kooria Mooria	Ballast	-	N.W. of Duncansby Head.
(99) William Henry Schooner—81—5. (5 years.)	Liverpool	Liverpool	18 July	-	-	-	-	Lossiemouth	-	Salt	Ness of Duncansby.

RETURN of VESSELS in DISTRESS on the E. and N.E. COASTS OF SCOTLAND, 1856 & 1857.

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty; and whether resulting in total Loss or partial Damage. 18.	No. of Lives lost. — Estimated Loss on Property when known. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	Particulars (if any) that can throw light on the Cause of the Casualty. 22.	Would a Harbour of Refuge have saved the Vessel; and, if so, where? 23.
SEA.								
Thick	N.E. 9	-	Dismasted; partial	Nil. £500.	Stress of weather	-	-	No. C.G. Taken into Leith.
Hazy	E.S.E. 10	-	Dismasted; partial	Nil. £700.	Stress of weather	-	-	No. C.C. Taken to Inverness.
SHETLANDS.								
Hazy	0	-	Stranded; total	Nil. £1,690.	Struck on rock in a dead calm; vessel drifting with tide.	-	-	Yes, in vicinity. C.C.
Thick fog	S.E. Calm.	-	Stranded; total	Nil.	Fog	-	-	No. C.C.
Dense fog	E. 2	High water	Stranded; total	Nil.	Thick weather	-	-	Not applicable. C.C.
ORKNEYS.								
Fine	9	-	Leak; partial	Nil.	-	-	-	Put into Kirkwall to repair.
Rainy	W.N.W. 7	-	Leaky; partial	Nil.	Stress of weather caused her to strain at sea.	-	-	Put into Stromness.
Bad	Variable. 8.	-	Leaky; partial	Nil.	Unseaworthy; leak daily increasing.	-	Imperfect repair	No. C.G. Put into Stromness.
Squally, with showers.	S. 9	-	Stranded; got off	Nil. £250.	Stress of weather; parted cables when getting under weigh.	-	-	Yes, in vicinity. C.C.
PENTLAND FIRTH.								
-	-	-	Damaged by fire partial.	Nil.	Spontaneous combustion of cargo.	Yes	No	Not applicable. Put back to Stornoway.
Snow	N.N.W. 10.	-	Burned; partial	Nil. £150.	Stress of weather caused vessel to leak. Cargo heated and set fire to vessel.	No	Struck on anchor	No. C.C.
Thick	S.E. 1	-	Stranded; got off	Nil. £240.	Drifted on shore in dead calm; thick weather.	-	-	No; Castle Hill Creek only 3 miles distant. C.C.
Squally	N.N.W. 6.	-	Dismasted and abandoned.	Nil. 190.	Stress of weather	-	-	No. C.C.
Squalls	W.N.W. 10.	1 hour flood	Stranded; total	6	Ignorance of tides, and heavy gale.	-	-	Yes, in vicinity; if master had been acquainted with it. C.C.
Hazy	S.W. 2	Young flood	Stranded; total	Nil. £400 and cargo.	Darkness and mist, and strong tide.	-	-	No. C.C.
Fog	S.E. 2	½ ebb	Stranded; total	Nil. £1,600.	Tide, dense fog, and want of wind to keep steerage way.	-	-	Very doubtful in this case. C.C.
Fire	W. 0	½ flood	Stranded; got off	Nil.	Strong current and calm weather.	-	-	Not applicable. C.C.
Fine	Variable	-	Stranded; total	Nil.	Sea running high, vessel dragged on rocks by tide. No wind.	—	—	—
Fine	Calm	-	Struck rocks and sunk in deep water; total.	Nil. £700.	Heavy roll of sea, and no wind.	—	—	—
Fine	S. 4 and then 0.	-	Stranded; total	Nil. £2,000.	Got into the eddy and became becalmed; drifted ashore.	-	-	No. C.C.
Moderate	W. 1	4 hours ebb	Stranded; got off	Nil.	Strong current and light wind.	—	—	—

Return of Vessels in Distress on the E. and N.E. Coasts of Scotland, 1856 and 1857—*continued.*

Name, Description, and Age of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Cargo. 11.	Exact Spot where Casualty happened or Distress occurred. 12.
CAITHNESS COAST.											
(109) Perseverance - Barque—489—15. (14 years.)	St.John's, N.B.	Dundee -	1857. 17 Aug.	- -	- - -	- -	- - -	Miramichi -	- -	Coals	N. side of Freswick Bay.
(48) Countess of Caithness. Schooner—71 5. (5 years 8 m.)	Wick -	Shields -	31 Dec.	- -	- - -	- -	- - -	Wick - -	- -	Coals	N. pier Wick: struck by sea in entering harbour.
(77) Oracle - - Schooner-56--4. (30 years.)	Sunderland -	Wick -	27 Mar.	- -	- - -	- -	- - -	Orkneys -	Ballast	- -	Wick Bay -
(89) Furst Borwin III. Schooner-82 5. (12 years.)	Newcastle -	Sunderland -	8 April	- -	- - -	- -	- - -	Wick - -	- -	Lime	Pulteney Harbour, Wick.
(118) Concordia - Schooner—148-7. (Age unknown.)	Altona -	Wick -	31 Oct.	- -	- - -	- -	- - -	Harborg -	- -	Fish	Wick - -
(14) Mary Ann - Sloop—22—2. (14 years.)	Banff - -	Banff -	1856. 13 Mar.	4 A.M.	Moderate -	S.	- - -	Tain - -	- -	Oatmeal	Littleferry outer bar, called Gizzen Briggs, entrance to Dornock Firth.
35) Despatch - S. Barque—294—19. (11 months.)	Dublin -	Inverness -	27 Oct.	10 P.M.	- - -	- -	- - -	London -	- -	General	Sandbank at entrance to Littleferry while in charge of a pilot.
'58) Janetta - - Schooner—60—4. (18 years.)	Newcastle -	Brora -	1857. 24 Dec.	- -	Fine - -	Fair.	- -	Newcastle -	- -	Timber	Dunskeith in Cromarty Firth.
INVERNESS.											
45) Grace Gibb - Schooner—51—5. (16 years.)	Wick -	Hamburgh -	1856. 1 Nov.	- -	- - -	- -	- - -	Inverness -	- -	Bones	Alburtie Point, 4½ miles E. of Inverness.
104) Midge - - Schooner—59—4. (16 years.)	Inverness -	Inverness -	1857. 5 Aug.	12 30 P.M.	- - -	- -	- - -	Newcastle -	- -	Wood	Mouth of Inverness Harbour.
(40) De Leeaw - Brigantine—226—9.	Holland -	Riga - -	- -	- -	- - -	- -	- - -	Ayr - - -	- -	Timber	4 miles from Nairn, Moray Firth.
(121) Darling - - Schooner—88—5. (16 years.)	Inverness -	Hartlepool -	19 Nov.	- -	Fair - -	- -	- - -	Inverness -	- -	Coals	Longman, Inverness.
SEA.											
(75) Favourite - Brig—182—7. (20 years.)	Blyth - -	Blyth - -	16 Mar.	- -	- - -	- -	- - -	Swinemund -	- -	Coals	North Sea -
(69) Arab - - (Say 100—5.)	Peterhead -	Speymouth -	12 Mar.	- -	- - -	- -	- - -	Fraserburgh -	B allast	- -	Moray Firth, off Fraserburgh.
(124, 125) 2 Fishing Boats.	Port Knockie	The morning was so clear and fine that these three boats had ventured half across the Moray Firth.									
(126, 127) 2 Fishing Boats.	Buckie -										
(128) Fishing Boat -	Port Gordon -										
SOUTH COAST OF MORAY FIRTH.											
(67) Alert - Schooner—76—5.	Sunderland -	Sunderland -	- -	- -	- - -	- -	- - -	Cromarty -	- -	Coals	Bay of Findhorn, W. point of bar.
31) Isabella Anderson Sloop—28--3. (3 years.)	Burghead -	Loading at Burghead.	1856 27 Sept.	11 P.M.	Rough -	W.N.W.	High water -	- - -	- -	Stones	Off Burghead
(47) Earl of Seafield - Schooner—49—4.	S. Shields -	S. Shields -	- -	- -	- - -	- -	- - -	Beauly -	- -	Coals	1 mile E. of Lossiemouth
26) Haidee - - Schooner—55—4. (9 years.)	Aberdeen -	Spey - -	17 Aug.	11 A.M.	Moderate -	E.S.E.	- - -	Hartlepool -	- -	Wheat	Spey Carr

Return of Vessels in Distress on the E. and N.E. COASTS of SCOTLAND, 1856 and 1857—*continued.*

CAITHNESS COAST.

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty; and whether resulting in total Loss or partial Damage. 18.	No. of Lives lost. — Estimated Loss on Property when known. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	Particulars (if any) that can throw light on the Cause of the Casualty. 22.	Would a Harbour of Refuge have saved the Vessel; and, if so, where? 23.
Thick fog	S. 5	⅓ flood	Stranded; got off	Nil. £2,250.	Going at full speed through Pentland Firth in a fog.	- - -	- - - -	No. C.C.
Dark	E.S.E. 4.	- - -	Stranded; total	Nil. £1,775.	Entered harbour too soon on tide; mistook lights in a doctor's carriage for pilot's signal to take harbour.	- - -	- - - -	Yes, in vicinity. C.C.
Clear	E.N.E. 4.	- - -	Stranded; got off	Nil. £100.	Missed stays in working out of bay.	- - -	- - - -	Yes, in vicinity. C.C.
Clear	N.E. 2	High water	Burned; total	Nil. £525.	Leaked through thumping; cargo heated and took fire.	No	- - - -	Yes, in vicinity. C.C.
Middling	S.S.W. 6.	- - -	Stranded; got off	Nil.	Struck by heavy sea on leaving Wick in charge of pilot. Put back on 3d Nov.	- - -	Want of caution	No. C.C.
Fine	Calm	- - -	Stranded; got off	Nil.	Wind falling calm, and strong ebb tide, parted from anchor.	- - -	- - - -	No. C.C.
Fine and clear	Calm	- - -	Stranded; got off	Nil. £500.	Want of caution on part of pilot; loss of rudder, &c.	- - -	- - - -	Not applicable.
Snow storms	E.N. & by E. 11.	⅓ flood	Stranded; total	Nil. £490.	Stress of weather	- - -	- - - -	No. C.G.

INVERNESS.

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty; and whether resulting in total Loss or partial Damage. 18.	No. of Lives lost. — Estimated Loss on Property when known. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	Particulars (if any) that can throw light on the Cause of the Casualty. 22.	Would a Harbour of Refuge have saved the Vessel; and, if so, where? 23.
Stormy	S.W. 9	- - -	Stranded; total	Nil. £600.	Stress of weather; parted from both anchors during a gale.	- - -	- - - -	No. C.C.
Fair	N.N.E. 5.	- - -	Stranded; got off	Nil. £60.	Error of pilot when taking her out of harbour.	- - -	- - - -	Not applicable. C.G.
- - -	N.W. 10	- - -	Stranded; got off	Nil.	Stress of weather	- - -	Ship had not enough canvass set.	No. C.C.
Thick and rain	N.E. 9	⅓ tide	Stranded	Nil.	Driven from anchors at Longmans in heavy gale.	- - -	- -	No. C.C.

SEA.

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty; and whether resulting in total Loss or partial Damage. 18.	No. of Lives lost. — Estimated Loss on Property when known. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	Particulars (if any) that can throw light on the Cause of the Casualty. 22.	Would a Harbour of Refuge have saved the Vessel; and, if so, where? 23.
Snow and sleet	S.E. 10.	- - -	Dismasted; partial	Nil. £200.	Stress of weather; gale in North Sea.	- - - -	- - - -	Put into Inverness. C.C.
Stormy; gale	S.W.	5 hours gone	Disabled; partial	Nil.	Stress of weather, and being unable to get into Fraserburgh.	- - - -	Waited off Fraserburgh from 12th to 17th, but could not get in, bore away crippled to Lossiemouth to refit.	—
- - -	12	- - -	Swamped	18 17 8	Sudden gale of a most violent character. 27 widows and 79 orphans were left by the crews of these 3 boats.	—	—	—

SOUTH COAST OF MORAY FIRTH.

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty; and whether resulting in total Loss or partial Damage. 18.	No. of Lives lost. — Estimated Loss on Property when known. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	Particulars (if any) that can throw light on the Cause of the Casualty. 22.	Would a Harbour of Refuge have saved the Vessel; and, if so, where? 23.
Squally	N.W. 10	- - -	Stranded; total	Nil. £460.	Stress of weather	- - -	- - - -	No. C.C,
Thick with rain	E.S.E. 10	¾ flood	Stranded; got off	Nil. £460.	Stress of weather; parted from moorings in a gale; drifted out of harbour.	- - -	- - - -	Not applicable. C.G. No. C.C.
Snowy	N.N.E. 9	3 hours flood	Stranded; total	Nil. £300.	Stress of weather, and thick snowy atmosphere.	- - -	- - - -	No. C.G.
Clear	E.S.E. 4	- - -	Stranded; total	Nil. £600.	Wind fell away as vessel was crossing the bar, which caused her to strike. Next tide it came on to blow, and vessel drifted ashore.	- - -	- - - -	No. C.G.

Return of Vessels in Distress on the E. and N.E. COASTS of SCOTLAND, 1856 and 1857—*continued.*

Name, Description, and Age of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Cargo. 11.	Exact Spot where Casualty happened or Distress occurred. 12.
(74) **Reintje Willemina.** **Schooner—60—4.** (1 year.)	**Groningen**	**Dantzic**	-	-	-	-	-	**Leith**	-	**Barley**	Craig Bay, Speymouth
(30) **Johns** Schooner—98—6. (5½ years.)	**Beauly**	**Beauly**	1856. 17 Sept.	A.M.	**Fair**	-	-	**Spey**	-	**Timber**	1 mile W. of Spey Car.
(119) **Janet and Ann** Schooner—19—3. (13 years.)	**Inverness**	**Nairn**	-	-	-	-	-	**Rosehearty**	-	**Timber**	Rocks, Sandy Bay, 5 m. W. of Banff
(29) Charles Brig—131—7. (20 years.)	**Aberdeen**	**Archangel**	-	-	-	-	-	**Aberdeen**	-	**Tar and Mats.**	Rocks, bars of Banff harbour.
(110) **Dunairn** Sloop—40—2.	**Sunderland**	**Sunderland**	1857. 22 Aug.	-	-	-	-	**Moray Firth**	-	**Coals**	Saltstone Rock near Banff
(106) **Earl of Clarendon.** Schooner—83—5. (1 year.)	**Banff**	**Sunderland**	**11 Aug.**	-	-	-	-	**Macduff**	-	**Coals**	Collie Rock, Macduff.
(120) **Ophelia** Schooner—99—7. (3 years.)	**Banff**	**Leith**	-	-	-	-	-	**Newcastle**	**Ballast**	-	N. Pier, Macduff Harbour
(79) **Betsey** Schooner—91—6. (8 years.)	Portsoy, N.B.	**Aberdour**	**16 Mar.**	-	-	-	-	**Dantzic**	-	**Coals**	Off of Rosehearty.

FRASERBURGH.

Name, Description, and Age of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide at Time of sailing. 8.	Port bound to. 9.	Ballast. 10.	Cargo. 11.	Exact Spot where Casualty happened or Distress occurred. 12.
(2) Aberdeenshire Steamer—149—12. (New, not classed.)	Aberdeen	Glasgow	1855. 25 Dec.	11 A.M.	**Moderate and foggy.**	1	-	Aberdeen	-	General	At the entrance of new harbour.
(38) Recovery Smack—21—3. (30 years.)	Inverness	Dundee	1856. 18 Nov.	2 P.M.	Dark	N.W. 5	2 hours after high water.	Wick	-	Timber	Cairnbulg Point 2 miles from
(42) Sovereign Schooner—114—9. (14 years.)	Banff	Banff	4 Dec.	-	Fresh	W.N.W.	1/8 ebb	London	-	Grain	Sunken rock off Cairnbulg.
(111) Providence Sloop—44—4. (11 years.)	Port Madoc	Port Madoc	1857. 20 Aug.	-	-	N.E.	-	Dundee	-	Slates	Rocks at Cairnbulg.

RATTRAY HEAD.

Name, Description, and Age of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide at Time of sailing. 8.	Port bound to. 9.	Ballast. 10.	Cargo. 11.	Exact Spot where Casualty happened or Distress occurred. 12.
(130) Planet Barque—392—15.	London	Quebec	-	-	-	-	-	Sunderland	-	Timber	15 miles from
(80) Name Unknown Schooner—70—5. (Age unknown.)	No papers on board.	-	-	-	-	-	-	-	-	Timber	Supposed at sea.
(25) Taurus S.S.—213—14. (1 month, 9 years A 1.)	Varel	Glasgow	-	-	-	-	-	Varel	-	Coals	¼ mile N. of Briggs Reef of sunken rocks.

PETERHEAD.

Name, Description, and Age of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide at Time of sailing. 8.	Port bound to. 9.	Ballast. 10.	Cargo. 11.	Exact Spot where Casualty happened or Distress occurred. 12.
(57) Maria Schooner—10—6. (17 years.)	Denmark	Denmark	1857. 9 Dec.	-	Fine	Fair.	-	Drontheim	-	Barley	Bore up in the N. sea, 30 miles off.
(63) Jane Schooner—45—3. (19 years.)	Cork	Leith	2 Feb.	-	-	-	-	Cromarty	-	Manure	Kirktown Bass, 4 miles N. of
(22) Victoria Schooner—54—4. (17 years.)	Banff	Sunderland	-	-	-	-	-	Banff	-	Coals	Point called the South Head.
(97) Oracle Schooner—54—4. (4 years.)	Sunderland	Sunderland	-	-	-	-	-	Peterhead	-	Lime	S. Quay.
(108) Fredericke Schooner—58—4. (8 years.)	Weiserdeich	Peterhead	-	-	-	-	-	Bremen	-	Fish and oil	S.E. Head between N. and S. harbour.

Return of Vessels in Distress on the E. and N.E. Coasts of Scotland, 1856 and 1857—*continued.*

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty; and whether resulting in total Loss or partial Damage. 18.	No. of Lives lost. Estimated Loss on Property when known. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	Particulars (if any) that can throw light on the Cause of the Casualty. 22.	Would a Harbour of Refuge have saved the Vessel; and, if so, where? 23.
Cloudy	E.S.E. 6.	- - -	Stranded	Nil. £800.	Sprung leak at sea; crew exhausted; run ashore to save her.	- - -	- - - -	No. C.G.
Hazy	N.N.E. to N.N.W. 8.	- - -	Stranded; total	Nil. £1,800.	Stress of weather caused her to break from her moorings.	- - -	- - - -	No. C.G. and C.C.
Hazy	W.S.W. 12.	- - -	Stranded; total	3	Great gale	- - -	- - - -	No. C.C.
Squally	E.S.E. 7.	2 hours after low water.	Stranded; two thirds cargo saved.	Nil.	Remaining at dangerous anchorage; wind arose and drove her on the rocks.	- - -	Want of judgment; and not letting go second anchor.	Not applicable. C.C.
Stormy	W.N.W. 7.	- - -	Stranded; total	Nil. £100.	Stress of weather; caught in strong gale off Cullen Head.	- - -	Struck a rock when running for shelter.	—
Dense fog	E.N.E. 3.	¾ flood	Stranded; total	2 £50.	Neglect of lead in dense fog.	- - -	Want of judgment in getting vessel under weigh in a fog; also in casting her in, instead of off, shore.	Not applicable. C.G.
Squally	E. 9	1¼ h. to high water.	Stranded; total	Nil.	Unmanageable through ballast shifting and loss of sails and rudder.	- - -	- - - -	No. C.G.
Thick and cloudy.	S.S.E. 8	- - -	Stranded; total	Nil.	Too close to shore, and neglect of lead in thick weather.	- - -	Error in reckoning	No. C.G.

FRASERBURGH.

Squally	S. 9	2 hours before high water.	Stranded; got off	Nil. £220.	Coming into harbour before high water, struck on some loose rocks and started some of her plates.	No - -	- - - -	Yes. C.C. It might have been avoided, had the entrance to Fraserburgh Harbour been cleared out. C.G.
Dark	N.W. 5	High water at 8 P.M.	Stranded; total	Nil. £240.	Want of lights; drove on ledge of rocks looking for pilot.	No - -	Ignorance of coast	There is an accessible harbour in the vicinity. C.C. and C.G.
Cloudy	W. 6.	½ ebb	Stranded; got off	Nil. Partial.	No beacon on the rock, and light wanted on Kinnaird Head.	No - -	Defective compasses, and not heaving lead.	There is an accessible harbour in the vicinity. No. C.C. Taken into Fraserburgh.
Thick	S.W. 2	5 hours flood	Stranded; got off	Nil.	Thick weather and defective chart.	- - -	- - - -	No. C.G. and C.C.

RATTRAY HEAD.

Bad	W.S.W. 9.	- - -	Abandoned; total	Nil.	Sprung a leak in heavy weather.	—	—	—
- -	- -	- - -	Dismasted and abandoned; drove ashore near Rattray.*	Unknown.	Supposed to be stress of weather.	—	—	—
Fine	S.S.W. 4	45 minutes past high water.	Stranded; total	Nil. £8,700.	Ignorance of coasts and neglect of lead.	- - -	- - - -	No. C.C. and C.G.

PETERHEAD.

Snow	S.E. 10	- - -	Leaky; partial	Nil. £1,230.	Stress of weather; leaky since 19th December, when on coast of Norway.	- - -	- - - -	Put into Leith.
Thick, with snow.	S.S.W. 8.	Low water	Struck rocks; total	Nil. £300.	Hugged the shore too close in thick snow.	- - -	Want of caution	No. C.G.
Fine	S.S.E. 2	⅓ ebb	Stranded; total	Nil. £280.	Heavy swell and cross tide drove her on rocks.	No - -	Want of caution in getting under weigh.	No. C.G. and C.C.
Fine	S.W. 3	⅓ flood	Burned; total	Nil. £130.	Spontaneous combustion of cargo; cannot be accounted for; vessel tight, and cargo dry.	No - -	- - - -	No. C.G.
Calm	- -	Nearly low water.	Stranded; total	Nil. £330.	Calm; strong wind drove vessel on rocks.	- - -	Vessel unmanageable	No C.G.

Return of Vessels in Distress on the E. and N.E. Coasts of Scotland, 1856 and 1857—*continued.*

Name, Description, and Age of Ship. 1.	Port of Regissry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Whether in Ballast or with Cargo. Cargo. 11.	Exact Spot where Casualty happened or Distress occurred. 12.
EAST COAST.											
(64) Falcon - - Schooner—101—6. (19 years.)	Aberdeen -	Sunderland -	1857. 26 Feb.	5 A.M.	- - -	- -	- - -	Newburgh -	- -	Lime	S. bank River Ythan
(24) Jezelina Galliot—82—5. (22 years.)	Dutch -	St. Petersburgh	- -	- -	- - -	- -	- - -	Newburgh -	- -	Bones	S. side of River Ythan.
(92) James - - Schooner—71—4. (16 years.)	Alloa - -	Alloa - -	20 April	- -	- - -	- -	- - -	Newburgh -	- -	Coals	S. side of River Ythan.
(131) Ebenezer - Schooner—65—5. (20 years.)	Sunderland -	Alloa - -	14 Dec.	- -	- - -	- -	- - -	Newburgh -	- -	Coals	N. side of mouth of River Ythan entering [illegible]
ABERDEEN.											
(53) Industry - - Schooner—81—6. (4 years.)	Beauly (Inverness).	Newcastle -	2 Jan.	- -	- - -	- -	- - -	Beauly - -	- -	Coals	½ mile S. of Aberdeen [illegible]
(93) Sir William Wallace. Brig—183—10.	Aberdeen -	Aberdeen -	17 April	- -	- - -	- -	- - -	Quebec -	Ballast	- -	Outside Aberdeen.
(112) Daigs - Sloop—19—2. (25 years.)	Fraserburgh -	Fraserburgh -	18 Sept.	- -	- - -	- -	- - -	Aberdeen -	- -	Fish and oil.	W. of Aberdeen breakwater.
EAST COAST.											
(95) Frederic - Brig—210—10. (6 years.)	Lubeck -	Cronstadt -	- -	- -	- - -	- -	- - -	Boston, N.S. -	Ballast	- -	Cove [illegible] Rocks of [illegible] Gd. State
(78) Happy Return - Schooner—63—4. (57 years.)	Sunderland -	Sunderland -	28 Mar.	- -	Moderate -	S.S.E.	- - -	Inverness -	- -	Coals	25 miles S.E. of Stonehaven.
(83) Hildine Annetta Schooner—80—6. (Age unknown.)	Tonsberg -	Tonsberg -	- -	- -	- - -	- -	- - -	N.B. - -	- -	Battens	Picked up [illegible] 56° N. [illegible] E.
(60) Dan Glaister - Schooner—70—5.	Macduff -	Liverpool -	1 Jan.	- -	- - -	- -	- - -	Montrose -	- -	Salt	Charlton Sands 2 miles S. of Northesk.
(61) Southesk - - Brig—170—8. (9¾ years.)	Montrose -	Gottenburg -	13 Jan.	- -	Fair -	Fair	- - -	Montrose -	- -	Timber	S. side entrance River South Esk.
MONTROSE.											
(62) Mabon - - Schooner—109—6. (16 years.)	Arbroath -	Seaham -	30 Jan.	- -	- - -	- -	- - -	Arbroath -	- -	Coals	N. point of Montrose.
(43) Thornaby - Schooner—66—4.	Kirkaldy -	Newcastle -	1856. 3 Dec.	5 A.M.	- - -	W.N.W.	High water -	Leith - -	- -	Coals	Annette Bank, Montrose.
(76) Undine - - Galliot—63—5.	Norway -	Stathelle -	1857. 9 Mar.	- -	Fine - -	- -	- - -	Ostend -	- -	Timber	Annette Bank, Montrose.
(44) Myrtle - - Brig—60—4. (47 years.)	Kirkaldy -	Newcastle -	1856. 21 Nov.	Noon	Good - -	Light W.	¾ flood -	Kirkaldy -	- -	Coals	Lunan Bay, Montrose (at anchor).
(84) Name unknown Schooner—90—6. (Age unknown.)	Norway -	- - -	- -	- -	- - -	- -	- - -	- - -	- -	Timber	S. of Redcastle Lunan Bay

Return of Vessels in Distress on the E. and N.E. Coasts of Scotland, 1856 and 1857—*continued.*

EAST COAST.

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty; and whether resulting in total Loss or partial Damage. 18.	No. of Lives lost. Estimated Loss on Property when known. 19.	Circumstances which caused the Casualty, 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	Particulars (if any) that can throw light on the Cause of the Casualty. 22.	Would a Harbour of Refug have saved the Vesse and, if so, where? 23.
Fine - -	S. Calm	1 hour 20 min. before high water.	Stranded; partial -	Nil. £55.	Becalmed crossing the bar, and carried by strong current on the S. bank of river.	- - -	- - - -	No. C.G.
Fine - -	N. 6, changed to E.S.E.	Low water -	Stranded; total -	Nil. £160.	Anchor did not hold; vessel drifted ashore; bad weather and change of wind broke her up.	- - -	Stranded through insufficiency of anchors, and became a total wreck in subsequent storm.	No. C.C.
Fine - -	N.W. 3	High water -	Stranded; got off -	Nil.	Current took vessel aback, when working up river.	- - -	- - - -	Not applicable. C.G.
- - -	S.S.W. 7.	1 hour past high water.	Stranded; got off -	Nil. £260.	Got out of proper channel through tow rope breaking, and want of judgment.	- - -	- - - -	No. C.G

ABERDEEN.

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty; and whether resulting in total Loss or partial Damage. 18.	No. of Lives lost. Estimated Loss on Property when known. 19.	Circumstances which caused the Casualty, 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	Particulars (if any) that can throw light on the Cause of the Casualty. 22.	Would a Harbour of Refug have saved the Vesse and, if so, where? 23.
Thick and snowy.	E.S.E. 9	High water -	Stranded - -	Nil.	Stress of weather; heavy gale and sea dead on shore.	- -	- - - -	No. C.G.
Cloudy -	S.E. 6	- - -	Leaky; partial -	Nil.	Sprung a leak on leaving her port of departure.	- -	- - - -	Put into Stornoway to discharge.
Squally, with rain.	N. 9	Last ¼ ebb -	Stranded; total -	Nil. £110.	Strong current in river -	- - -	- - - -	Not applicable. C.G.

EAST COAST.

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty; and whether resulting in total Loss or partial Damage. 18.	No. of Lives lost. Estimated Loss on Property when known. 19.	Circumstances which caused the Casualty, 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	Particulars (if any) that can throw light on the Cause of the Casualty. 22.	Would a Harbour of Refug have saved the Vesse and, if so, where? 23.
Thick fog -	E. 2	¼ flood -	Stranded; got off -	Nil.	Thick fog, and error in reckoning.	- - -	- - - -	No. C.G.
Hazy -	S.S.E. 10	- - -	Abandoned; total - Afterwards picked up derelict.	1 £495.	Leaky through stress of weather.	- - -	Too deeply laden -	No. C.C.
Thick - -	S.E. 9	- - -	Abandoned, dismasted and water-logged; picked up derelict and towed towards Aberdeen by "Olga;" "Olga" eventually cast her off, and she stranded near Rattray Head.	6 £200.	Stress of weather.	—	—	—
Dark and hazy	W. 5.	High water -	Stranded; got off -	Nil.	Negligence of pilot -	- - -	- - -	No. C.G.
Squally, dark, and cloudy.	N.W. by N. 6.	30 minutes to high water.	Stranded; total -	N £1,525	Strong tide swept vessel on the rocks while being towed into the harbour.	- - -	Want of power in steam tug.	No. C.C.

MONTROSE.

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty; and whether resulting in total Loss or partial Damage. 18.	No. of Lives lost. Estimated Loss on Property when known. 19.	Circumstances which caused the Casualty, 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	Particulars (if any) that can throw light on the Cause of the Casualty. 22.	Would a Harbour of Refug have saved the Vesse and, if so, where? 23.
Thick and hazy	S. 7.	High water -	Stranded; total -	Nil. £750.	Stress of weather -	- - -	Wheel broken by sea; vessel could not be steered.	No. C.G.
Stormy -	W.N.W. 12.	High water -	Stranded; total -	Nil. £500.	Blown on shore by hurricane whilst being towed in for shelter by steam tug.	Yes; Carr Rocks; driven back to Montrose.	- - - -	Possibly in the vicinity. C.G. Yes, at Montrose. Mate,
Squally and hazy.	E.N.E. 6	- - -	Stranded; total -	Nil. £200.	Stress of weather -	- - -	Ran for Montrose Harbour in ignorance of locality; thick weather.	Yes, Montrose. C.G.
Thick -	S.S.W. 9.	Low water -	Foundered; total -	Nil. Total.	Stress of weather; ship leaky and pumps choked.	Yes; northward to Farn Islands; put back to Sunderland and repaired; when again off Farn Islands had to run for Montrose with wind W.	- - - -	Yes, in vicinity; could not get to Montrose in time. C.G. Yes, at Montrose. M.
Hazy and rain	E. 6	- - -	Abandoned at sea, dismasted and water-logged, and afterwards stranded; broke up 10 minutes after stranding; total.	All hands. Number unknown; say 6	Stress of weather and unseaworthiness.	- - -	Unseaworthy; "this vessel was, without exception, the most rotten and worn out thing ever seen by the coast guard officer; supposed to be 100 years old; lining was payed with red ochre clay to keep her staunch.	No. C.G.

Return of Vessels in Distress on the E. and N.E. Coasts of Scotland, 1856 and 1857—*continued.*

Name, Description, and Age of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo.		Exact Spot where Casualty happened or Distress occurred. 12.
									Ballast. 10.	Cargo. 11.	
SEA.											
(51) Sarah Botsford - Barque—304—10. (16 years.)	Hartlepool -	Gottenburg -	1857. 24 Dec.	- -	- - -	- -	- - -	Berwick -	- -	Timber	40 miles [illegible] Red Hea[illegible]
(103) London Packet Schooner—81—6. (22 years.)	Arbroath -	Stettin -	- -	- -	- - -	- -	- - -	Ipswich -	- -	Barley	Lat. [illegible] Long. [illegible]
ARBROATH.											
(122) Brighton - Schooner—53—3. (Age unknown.)	Stockton -	Arbroath -	21 Nov.	- -	- - -	- -	- - -	Middlesbro' -	Ballast	- -	Outside Harbour.
(129) Elizabeth - Brig—109—6. 25 years.)	Arbroath -	Dundee -	5 Dec.	- -	- - -	- -	- - -	Seaham -	Ballast	- -	Entrance Arbroath Harb.
TAY.											
(17) Diana - - Galliott—46—5. (24 years.)	Denmark -	Hamburgh -	- -	- -	- - -	- -	- - -	Dundee -	- -	General	N. S. [illegible] Tay.
(12) Woodside - Schooner—54—3. (1½ years.)	Newcastle -	Powgavie -	- -	- -	Heavy gale -	W.S.W.	- - -	Goole -	- -	Wheat	[illegible] Quay [illegible] Tay, [illegible] Powgavie [illegible] Dundee
(82) Dagman - Sloop—71—6. (20 years.)	Nexoe -	Holbech -	18 Mar.	- -	- - -	- -	- - -	Leith -	- -	Barley	Abertay [illegible] Dundee
(85) Jane Landale - Schooner—53—4. (12 years.)	Liverpool -	London -	23 Mar.	- -	- - -	- -	- - -	Invergordon -	- -	Guano	Abertay [illegible] Dundee
(88) Weanterflide - (Schooner—111—6. (11 years.)	Drammen -	Drammen -	- -	- -	- - -	- -	- - -	St. Andrew's -	- -	Battens	Rocks of [illegible] pier, St. Andrews.
FORTH.											
(23) Brothers - Schooner—57—4. (10 years.)	Dundee -	Sunderland -	- -	- -	- - -	- -	- - -	Dundee -	- -	Lime	Bell Rock [illegible] miles N [illegible] ness.
(91) Queen - - S.S.—336—31. (Age unknown.)	Aberdeen -	Aberdeen -	18 April	6 P.M.	- - -	- -	- - -	Leith -	- -	General and Passengers.	Carr Rock
(123) Martello - S.S.—325—32. (15 years.)	Inverness -	Inverness -	27 Nov.	5 15 P.M.	Clear - -	Fair	- - -	Granton -	- -	General and Passengers.	Carr [illegible] Fifeness.
(50) Maria - - Brig—274—10. (17 years.)	Weymouth -	London -	16 Dec.	- -	Fine - -	Westerly	Not known -	Shields -	Ballast	- -	100 miles [illegible] Island [illegible]
(49) Freyd - - Schooner—127—6. (22 years.)	Svendborg -	Hartlepool -	2 Jan.	- -	- - -	Fair wind	- - -	Denmark -	- -	Coals	72 miles [illegible] Island [illegible]
(20) Name unknown Schooner—100—5.	- - -	- - -	- -	- -	- -	- -	- - -	- - -	- -	- -	25 miles [illegible] of Fi[illegible] Seen [illegible] of May [illegible] Guard.
(70) Spes Nova - Brig—181—10. (Age unknown.)	Strathelle -	Strathelle -	10 Mar.	- -	- -	- -	- - -	Portsmouth -	- -	Timber	North S[illegible] Isle of M[illegible]
(90) Landbourne - Smack—61—5.	Veendaam -	Aberdeen -	- -	- -	- -	- -	- - -	Hamburgh -	- -	Coals	W. of I.[illegible]
(5) Origin - - Sloop—61—4. (28 years.)	Dundee or Stonehaven.	Burntisland -	1856. - -	- -	- -	- -	- - -	Aberdeen -	- -	Iron	Near Isle [illegible] May and [illegible] struther.
(8) Annie - - Sloop—33—3. (Age unknown.)	Elie - -	Newcastle -	5 Feb.	3 A.M.	Moderate -	W. 4	High water -	Elie - -	- -	Coals	E. of El[illegible] Harbour.
(15) Blue Bonnet - Schooner—121—7. (6 months.)	Leith - -	Grangemouth	29 March	- -	- -	-	- -	Rotterdam -	- -	Iron	Chapel[illegible] mile W. [illegible] Elie [illegible]

Return of Vessels in Distress on the E. and N.E. Coasts of Scotland, 1856 and 1857—*continued.*

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty; and whether resulting in total Loss or partial Damage. 18.	No. of Lives lost. Estimated Loss on Property when known. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	Particulars (if any) that can throw light on the Cause of the Casualty. 22.	Would a Harbour of Refuge have saved the Vessel; and, if so, where? 23.
SEA.								
Thick, with snow.	S.E. 11	- - -	Leaky; partial	Nil. £300.	Stress of weather	- - -	- - - -	Bore up for the Firth of Forth and put into Leith Dock.
Bad	W. 9	- - -	Foundered; total	Nil.	Sprung a leak.	—	—	—
ARBROATH.								
Heavy	S. 6	Tide falling	Stranded; got off	Nil.	Struck pier head	- - -	Running in without a pilot.	—
Wet	S.S.W. 10.	- - -	Struck; got off	Nil. £300.	Trying to make harbour in stress of weather.	—	—	—
TAY.								
Fine	N.E. 7	- - -	Stranded; got off	Nil.	Stood in too close	- - -	Error in judgment	No. C.C. Taken into Dundee.
Clear	S.E. 11	High water	Stranded; total. Subsequently recovered and taken into Dundee.	Nil. £650.	Dragged from her anchors in a hurricane.	- - -	- - - -	No. O.
Thick	E.; moderate.	High water	Stranded; total	Nil. £1,900.	Error in course; mistook the Tay for the Forth.	- - -	- - - -	No. C.C.
Very thick	E. 7	High water	Stranded	Nil.	Taking Montrose Harbour in thick weather. Vessel became unmanageable when at the bar.	- - -	- - - -	No. C.C.
Cloudy	W. 4	High water	Stranded; total	Nil.	Thrown by swell against rocks in entering harbour.	- - -	- - - -	No. C.G.
FORTH.								
Thick, with rain.	N.E. 5	- - -	Abandoned; total	Nil. £500.	Both masts carried away; shipped much water; abandoned.	- - -	- - - -	No. C.G.
- - -	6	- - -	Stranded	Nil.	Shaped wrong course for Bell Rocks; struck on Carr Rocks, got off and ran along shore. Stranded her to save life and property.	—	—	—
Hazy	W. 2	- - -	Stranded	Nil.	Master states, "Compasses affected by fog, and by moving masses of iron on board."	- - -	Defective compasses, and running without lead in a fog. The loss of this vessel amounted to default on part of the mate, whose certificate was suspended in consequence.	—
Thick snow	E.S.E. 11	Not known	Dismasted; partial	1 washed overboard. £450.	Stress of weather	Was driven as far N. as the I. of May in a gale of wind from W.N.W. to S.S.E.	The wreck was occasioned solely by the severity of the weather.	No. C.C. Put into Leith.
Stormy, with snow.	E.S.E. 11	- - -	Foundered; total	Nil. £665.	Sprung a leak through stress of weather.	—	—	—
No particulars	9	- - -	Foundered; total	Say 5	- - - -	- - -	- - - -	No particulars. C.G.
Variable	S.E. 10	- - -	Leaky; partial	Nil.	Stress of weather	- - -	- - - -	Got into Leith. C.C.
- - -	- -	- - -	Run down; total	Supposed 5 £50.	Supposed to have been run down.	- - -	- - - -	Cannot say in this case. Taken into Kirkaldy derelict. C.G.
Hazy	S.S.W. 8.	½ flood	Dismasted, and abandoned; total.	Nil. £850.	Stress of weather	- - -	- - - -	No. C.G.
Hazy and dark	S.W. 7	½ flood	Stranded; total	3 £140.	Mistaking bearings; no harbour lights.	- - -	Supposed to have mistaken Wood Haven for Elie Bay.	Unknown; all hands drowned; should be a harbour light at Elie. C.G.
Hazy	W.S.W. 1.	High water	Stranded; got off	Nil.	Hazy weather and defective compass.	No	Iron on board deranged the compass.	No. C.G., C.C., and O.

Return of Vessels in Distress on the E. and N.E. Coasts of Scotland, 1856 and 1857—*continued.*

Name, Description, and Age of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Cargo. 11.	Exact Spot where Casualty happened or Distress occurred. 12.
(8) Sir Edward Banks Schooner—59—5. (32 years.)	Aberdeen	Newcastle	1857. -	-	-	-	-	Aberdeen	-	Iron	Entrance of Elie harbour.
(87) Rapid S. S.—330—22. (7 months.)	Leith	London	8 April	-	Light winds	Variable.	-	Leith	-	General	Vous Rocks, N. Kirkaldy.
(39) Eimgkeight Galliot—87—6. (10 years.)	Konigsberg	Konigsberg	-	-	-	-	-	Burntisland	-	Iron	Burntisland Harbour.
(117) Times Sloop—48—3. (8 years.)	Alloa	Newcastle	5 Oct.	-	-	-	-	Alloa	-	General	Doig's Rock, Frith of Forth.
(18) Mary and Catherine. Schooner—76—5.	Dundee	Bo'ness	1856. -	-	-	-	-	Dunkirk	-	Pig Iron	N. side Bremer Rocks coming down the Firth.
(4) Annabella Schooner—90—5. (Age unknown.)	Goole	Hartlepool	23 Jan.	-	-	-	-	Grangemouth	-	Coals	N. side of Frith of Forth on C[illegible] Rock.
(7) Catherine Schooner—61—3.	Leith	Leith	10 Feb.	-	Strong breeze	W.	-	Bo'ness	-	Coals	Off Gran[illegible]
(56) Johanna Schooner—72—4. (1 year.)	Barth	Amsterdam	1857. 26 Dec.	-	Fine	S.W.	-	Newcastle	-	Oil	Firth of Forth
(33) Indelborg Emilie Brig—157—8.	Aster	Riga	1856. -	-	-	-	-	Fisherrow	-	Hemp	Off Leith
(36) Amazone Barque—258—11. (9 years.)	Stralsund	Middlesbrough	9 Nov.	-	Fine	W.N.W.	-	Griefswald	-	Iron.	Off Leith
(71) Horta Brig—247—9. (Age unknown.)	Shields	Shields	1857. 16 Mar.	-	-	-	-	Hamburgh	-	Coals	North Sea
(6) Name unknown Schooner—76—3. (Age unknown.)	-	-	-	-	-	-	-	-	-	-	4 miles S.E. of Inchkeith.
(115) Peggy Sloop—32—2. (42 years.)	Leith	Buckhaven	1 Oct.	-	-	Fair	-	Leith	-	Fish	Between Inchkeith and the Vous Rock.
(68) Henriette Brig—131—7. (Age unknown.)	Dram	Charleston, N.B.	5 July	-	-	S.	-	Christiana	-	Coals	Off Leith
(1) Emblem Schooner—70—5. (Age unknown.)	Wisbeach	Boston	1856. -	-	-	-	-	Grangemouth	-	Barley	At Cockenzie from N. end of Inchkeith E.S.E., and from N.E. of Gullness N.W.
(9) Commercial Packet Sloop—32—3.	Leith	Leith	6 Feb.	11 A.M.	Moderate	S.E.	-	Aberlady	-	Manure	Sands off Aberlady, Firth of Forth.
(52) Swende Sodskinde Sloop—59—4.	-	Wyborg	-	-	-	-	-	Leith	-	Wheat	Scoughall Rocks, E. of N. Berwick.
(55) Maria Annette Sloop—50—4.	Denmark	-	-	-	-	-	-	-	-	Wheat and tares.	Scoughall Rocks, N. Berwick.
(11) Kitty's Wake Sloop—46—2. (5 years.)	Sunderland	Sunderland	-	-	-	-	-	Glasgow	-	General	3 miles E. of the Bass Rock in the Firth of Forth.
(10) Margaret Schooner—72—5. (10 years.)	Grangemouth	Berwick	6 Feb.	-	-	-	-	Coalport	Ballast	-	East coast
(66) Jeanie Sloop—57—4.	Newcastle	Leith	-	-	-	-	-	Newcastle	-	Pig Iron	2 miles N. of St. Abb's Head.
(16) Providence Schooner—83—5. (5 years.)	London	Thurso	30 Mar.	-	-	-	-	London	-	Stone	Off St. Abb's Head.
(116) Hebe Schooner—74—4.	Dundee	Bo'ness	-	-	-	-	-	Dieppe	-	Coals	Off St. Abb's Head.
(46) Margarets Schooner—96—6. (5½ months.)	Aberdeen	Leith	7 Dec.	9 A.M.	Rainy	Moderate W.	High water	Cadiz	-	Wheat	On the rocks near Goatness, Dunbar.
(54) Cromarty Schooner—111—5.	Aberdeen	-	1857. -	-	-	-	-	-	Ballast	-	Catcraig, 3 miles E. of Dunbar.

Return of Vessels in Distress on the E. and N.E. Coasts of Scotland, 1856 and 1857—*continued.*

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty; and whether resulting in total Loss or partial Damage. 18.	No. of Lives lost. — Estimated Loss on Property when known. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	Particulars (if any) that can throw light on the Cause of the Casualty. 22.	Would a Harbour of Refuge have saved the Vessel; and, if so, where? 23.
Hazy	S.W. 9	2 hours ebb	Stranded; got off	Nil.	Stress of weather Sprung a leak; bore up and stranded in entering harbour.	- - -	Stranded in consequence of state of the tide.	Yes; in vicinity. C.G.
Dense fog	Variable. 1.	- - -	Stranded; got off	Nil.	Thick weather. Log and lead had been kept going.	- - -	- - - -	Not applicable. C.C.
Cloudy	N.W. 7	- - -	Struck bottom; partial	Nil. £750.	Stress of weather	No	Heavy swell struck vessel whilst loading.	Not applicable. Taken into Leith.
Fair	W.N.W. 6.	1 hour flood	Stranded; got off	Nil.	Mistaking bearings for want of a buoy.	- - -	- - - -	No. C.C.
Fine	W.N.W. 1.	- - -	Stranded; got off	Nil.	Error in judgment	- - -	- - - -	No. C.G. Taken into St. David's.
- - -	N.W. 7	- - -	Stranded; got off	Nil.	Got too near shore	- - -	Error in judgment	Put into Bo'ness.
Wet	S.W. 12	¾ flood	Foundered; total	3	Stress of weather	No	Parted from her moorings in a whole gale; not since heard of.	No. C.C.
Hail	S.E. 11	- - -	Leaky; partial	Nil. £20.	Stress of weather	- - -	- - - -	Put into Granton.
Thick	E.N.E. 10	- - -	Stranded; total	Nil. £2,250.	Drove from anchors in Fisherrow Bay, Sept. 27.	—	—	—
Stormy	N.E. 9	- - -	Damaged by heavy sea; partial.	3	Stress of weather	- - -	- - - -	No. R.W. Got into Humber.
Variable	- -	- - -	Leaky; partial	Nil.	Stress of weather	- - -	- - - -	Got into Leith. C.C.
- - -	12	- - -	Foundered; total	All; say 3	Stress of weather	- - -	- - - -	No information can be obtained. Wreck first seen at daylight on the 6th February. C.G
Thick	W. Gale	½ flood	Capsized; total	Nil. £520.	Sudden squalls of wind drove her on beam ends and filled her.	- - -	- - - -	No. C.C.
Stormy	N.E. 8	- - -	Leaky; stranded	Nil.	Sprung a leak at sea; took ground outside harbour, whilst entering in charge of a pilot.	—	—	—
- - -	- -	- - -	Run down; total	5	Supposed to have been run down by a steamer while laying to at anchor, waiting for daylight to beat up the Firth.	- - -	The boat was washed ashore, and looked as if cut down by a steamer.	Not applicable. C.C.
Stormy	W. 12	¾ flood	Stranded; total	4	Gale, which increased to a hurricane.	No	Struck on sands and rock on the 6th, got off without damage and brought to an anchor; wind increased to a hurricane at night; vessel disappeared. Crew and pilot drowned.	No. C.C.
Hail	E. 11	¼ flood	Stranded; total	4	Stress of weather.	—	—	—
Stormy	E.S.E. 11	1 hour flood	Stranded; total	4	Stress of weather.	—	—	—
Thick	S.S.W. 12	Ebb tide	Abandoned; water-logged; total.	Nil. £700.	Stress of weather	- - -	Heavy gales from S.S.W.	No. C.C.
Rain	N.W. 12	- - -	Supposed to have foundered; total.	5 £600.	Violent tempest	- - -	Left Berwick on the 6th; driven out to sea and not since heard of.	—
Cloudy	N. 8	Near low water	Foundered; total	Nil.	Sprung a leak through stress of weather.	- - -	Could not be kept afloat with heavy cargo.	No. C.G.
Clear	W.N.W. 8.	- - -	Dismasted; partial	Nil. £840.	Stress of weather	- - -	- - - -	No. R.W. Put into Sunderland.
Thick	W.N.W. 10.	- - -	Foundered; total	Nil.	Sprung a leak, which could not be kept under.	- - -	Pumps choked.	—
Cloudy	S.W. 10	High water	Stranded	Nil.	Want of light to mark the reef of rocks near Goatness, Dunbar. C.G.	Yes; had reached Coquet Island.	- - - -	No. C.G. Perhaps at Coquet Island. C.C.
Stormy	E.S.E. 11.	2 hours flood	Stranded; total	5	Stress of weather.	—	—	—

Return of Vessels in Distress on the E. and N.E. Coasts of Scotland, 1856 and 1857—*continued.*

Name, Description, and Age of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Cargo. 11.	Exact Spot where Casu happened or Distress occurred. 12.
(32) Valentine - Brig—370—10. (14 years.)	Rostock -	Newcastle -	- -	- -	- - -	- -	- - -	Copenhagen -	- -	Coals	Took grou off Dunbar.
(86) Shelah - - Schooner—116—6. (16 years.)	Grangemouth	Rotterdam -	1857. 31 Mar.	- -	- - -	- -	- - -	Grangemouth	Ballast	- -	Catcraig, 1 m E. of Dunbar.
(113) Keepsake - Brig—311—11. (11 years.)	Workington -	Quebec -	- -	- -	- - -	- -	- - -	Dunbar -	- -	Timber	Dunbar Har- bour, [illegible] from E. pier

Return of Vessels in Distress on the E. and N.E. Coasts of Scotland, 1856 and 1857—*continued.*

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty; and whether resulting in total Loss or partial Damage. 18.	No. of Lives lost. — Estimated Loss on Property when known. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	Particulars (if any) that can throw light on the Cause of the Casualty. 22.	Would a Harbour of Refuge have saved the Vessel; and, if so, where? 23.
Stormy; gale	E. by S. 12.	- - -	Stranded; total -	Nil. £1,120.	Stress of weather -	- - -	- - - -	Yes, in vicinity. L.A.
Thick fog -	S.E. 6	Just past high water.	Stranded; total -	Nil. £1,000.	Mistaking lights of Oxwell Main lime-kilns for Tay Lights.	- - -	- - - -	No. C.G.
Fine - -	E.N.E. 3	High water -	Stranded; total -	Nil. £2,000.	Wind falling light and vessel losing steerage-way whilst entering harbour.	- - -	- - - -	No. Vessel bound to Dunbar. C.G.

VESSELS in DISTRESS (otherwise than by Collision) on the N., N.E., E., and S.E. COASTS OF IRE

Date of Casualty.	Name of Vessel. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind. Direction.	Wind. Force.	Weather.	Hour and Time of Tide.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
					ARRANMORE TO LOUGH SWILLEY.					
1856. (36) Feb. 6	Creole, of Londonderry	Barque	455	18	Londonderry to New Orleans	Iron	W.S.W.	12	Squally	8 P.M. 2 hours ebb.
(65) Mar. 13	Jane McCrea, of Girvan	Schooner	90	6	Liverpool to Ballina	General	S.S.E.	7	Hazy	10 A.M.
1857. (162) Mar. 12	Margaret, of Belfast	Smack	31	3	Londonderry to Ballina	Grain	S.W.	9	Squally	2 45 P.M.
(156) „ 10	Richmond, of Dublin	Schooner	83	5	Ballina to Liverpool	Oats	W.S.W.	7	Clear	8 P.M.
(208) Oct. 2	Pero, of Liverpool	Brig	231	10	Ardrossan to Naples	Iron	W.S.W.	9	Hazy	- -
1856. (111) Oct. 13	John Campbell, of Liverpool	Ship	624	19	Sunderland to Lisbon	Coals	W.S.W.	10	Moderate	7 P.M.
(130) Dec. 9	Edwin, of St. Ives	Schooner	108	6	Dublin to Hayle Island	Stores	S.	12	Gale	5 P.M.
					LOUGH SWILLEY.					
(40) Feb. 6	Augusta Jessie, of Newcastle	Barque	382	14 C.G. on board, 2	Callao to Cork	Guano	W.S.W.	12	Stormy	11 30 P.M. Low water.
1857. (218) Nov. 12	Pioneer, of Liverpool	Schooner	32	3	Ballygranie to Liverpool	Oats	W.	2	Fine	3 45 P.M.
					LOUGH FOYLE.					
1856. (32) Jan. 23	Kathleen, of Portsmouth	Brig	217	8	Alexandria to Londonderry	Wheat	S.E. by E.	9	Hazy and squally.	3 30 A.M. ½ flood.
(15) „ 10	Elizabeth, of Whitehaven	Brig	74	6	Liverpool to Londonderry	Salt	E.	4	Cloudy	2 A.M. First ½ flood.
					INNISHOWEN.					
(87) Aug. 5	William McCormick, of Londonderry.	Schooner	379	28	Liverpool to Londonderry	General	Calm.	- -	Thick fog	7 30 A.M.
1857. (160) Mar. 12	Maclellans, of Inverness	Smack	47	3	Troon to Londonderry	Coals	S. by W.	7	Cloudy	5 30 P.M.
(161) „ 14	Gwen, of Almwich	Schooner	85	5	Liverpool to Londonderry	Corn	S.S.W.	9	Hazy	8 30 P.M.
					PORT RUSH.					
1856. (74) April 3	Ann Reddin, of Prince Edward Island	Barque	485	14	Liverpool to Halifax	General	N.	9	Thick	- -
1857. (167) Mar. 16	Athlone, of Liverpool	Barque	434	17	Liverpool to Demerara	Coals	S.S.E.	10	Moderate	3 A.M.
1856. (120) Nov. 29	Strangford, of Belfast	Schooner	61	4	Troon to Londonderry	Coals	N.	9	Stormy	6 A.M.
1857. (181) April 24	Peveril, of Douglas	Schooner	35	4	Runcorn to Portrush	Salt	- -	5	Fair	2 P.M.

RRANMORE to CORK inclusive, and on the COASTS of ISLAY and KINTYRE, during the Years 1856 and 1857.

ge	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. — Remarks.	Authority.
ed ist.	Estimated Loss on. 14.	Insured for, and where. 15.	Estimated Loss on. 16.	Insured for, and where. 16.	18.	19.	20.	21.	22.

ARRANMORE TO LOUGH SWILLEY.

-	-	London	None	London	None	All	Stranded	off Moville, heavy gale, at anchor; one chain parted, dragged the other; ship struck heavily, and sprung a leak; got off at high water, and went into port to repair.	Wr. 353
- l's.	Unknown	Not	Unknown	Liverpool	None	-	Stranded	on a sunken rock off Island of Tony Rutland; dismasted; hazy weather; kept too close to land; got off much damaged, and cargo discharged.	Dep. & Wr. 893 „ 925
-	£10	Not	Unknown	Yes	-	-	Wrecked	on the Dundine Rock, near Sheep Haven. Blowing a heavy gale, and missing stays went ashore; got off, and taken to a place of safety in a sinking state.	Wr. 931
-	Unknown	Unknown	Unknown	Unknown	None	-	Dismasted	off Innistrahull. Heavy sea running, which carried away her gear; hove to until morning, and then bore up for Loughendale.	Wr. 1007
-	£200	Unknown	£80	Unknown	None	-	Dismasted	40 miles N. of Innistrahull. Strong gales of wind and heavy seas; put into Stornoway.	Wr. 1989
-	Unknown	Unknown	Unknown	Unknown	None	-	Leaky	off Innistrahull; put into Moville to discharge and refit.	Dep. 2231
-	Unknown	Lloyd's	Unknown	Unknown insured.	None	-	Stranded	half mile S. of Rathmullen; parted from one anchor and broke the other; drove in on the rocks and bilged.	Wr. 2683

LOUGH SWILLEY.

-	£2,400	Clubs	£6,000	Newcastle and London.	1	15, by coast guard boat	Wrecked	off Ned's Point, Lough Swilley, having put in there by stress of weather; struck and sunk; boats all stove; crew took to rigging, and were saved by coast guard; recovered, 26 $\frac{2}{12}$. S.G.	Wr. 390 „ 440 Dep. 423
-	£140	Unknown	£175	£350	None	-	Stranded	near Ballygranie, Lough Swilley. Not answering her helm, and sudden bend in river, went on her beam ends. Cargo discharged.	Wr. 245

LOUGH FOYLE.

-	£900	Unknown	£1,500	Unknown	None	All, by ropes from shore.	Stranded	half mile from L. H. of Lough Foyle; pilot could not board in the gale; master saw the light and proceeded, but ship would not stay, and there being no room to wear, ship struck heavily and filled. Total loss.	Wr. 231 S.G. Feb. 13
-	None	Unknown	None	Unknown	None	All	Stranded	on McKinney's Bank, near Blackbuoy, Lough Foyle. Not having a pilot on board, ran on sand bank; got off with slight damage.	Wr. 311

INNISHOWEN.

-	Unknown	Unknown London and Dublin.	Unknown £1,000.	Unknown Yes.	None	2	Stranded	7 miles W. of Innishowen, being thick fog and vessel on wrong course; had not seen Sheep Head or Bangor Head, which would have caused course to have been altered; lead not hove.	—
-	£250	Nil	£60	Unknown	None	-	Wrecked	half mile N. of Innishowen. Smack refused staying three times, and, having no room to wear, ship struck on the rocks, and became a wreck.	Wr. 851 „ 1019
-	£50	Bangor	None	Unknown	None	-	Stranded	near Innishowen Head. Beating up, missing stays, and endeavouring to wear her, she drove ashore; was got off with assistance and taken to Londonderry leaky.	Wr. 887 „ 956

PORT RUSH.

-	Unknown	Unknown	Unknown	Unknown	2	-	Dismasted	and seriously damaged in gales off the Skerries, by Rathlin Island; put into Belfast to discharge and repair.	Dep. 1092 Wr. 1100
-	Unknown	Yes	Unknown	Unknown	None	-	Leaky	off the Skerries. Heavy gale and sea; shipping much water; straining very much; all hands could not keep her free. Bore up for Belfast to discharge and repair.	Wr. 913
-	Unknown	Unknown	Unknown	Unknown	None	4, by coast guard	Wrecked	at Portrush, trying to avoid the sandbank; dropped anchor, which dragged; struck on S. Pier of harbour, and afterwards filled.	Wr. 2556. „ 2570.
-	Unknown	Not	Unknown	Yes	None	-	Leaky	off Portrush. Water being shallow, pricked on an anchor, which filled and sunk her. Afterwards discharged cargo in a damaged state, and put her in shore to repair.	Wr. 13

Vessels in Distress (otherwise than by Collision) on the N., N.E., E., and S.E. Coasts of Ireland, from

RATHLIN ISLAND.

Date of Casualty.	Name of Vessel. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind. Direction.	Wind. Force.	Weather.	Hour and Time of Tide.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
(89) 1856. Aug. 10	James Stewart, of Greenock	Brig -	239	13	Greenock to Newfoundland	General -	E.	10	Thick -	High water -
(198) 1857. Aug. 20	Florence, of Glasgow -	Ship -	960	31	Greenock to Quebec -	Coals -	N.W.	3	Dense fog	3 15 P.M. -
(196) „ 16	Neander, of Windsor, N.S.	Brig -	149	7	Greenock to Halifax -	Iron -	N.W. by W.	1	Dense fog	10 P.M. - -

ISLAY.

Date of Casualty.	Name of Vessel. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind. Direction.	Wind. Force.	Weather.	Hour and Time of Tide.
(41) 1856. Feb. 6	Mobile, of Liverpool - -	Ship -	1,040	28	Mobile to Liverpool -	Cotton -	W.S.W.	11	Hazy -	10 P.M.
(43) „ 6	Lark, of Leith - -	Smack -	54	4	Glasgow to Ardley -	Barley -	W.	10	Hazy -	11 30 P.M. -
(48) „ 7	Leverat, of Glasgow -	Schooner	51	4	Glasgow to Port Ellen -	Coals -	W.	10	Hazy -	3 A.M. - -
70) Mar. 26	Isabella, of Fraserburgh -	Schooner	81	6	Newcastle to Dublin - -	Coals -	E.S.E.	11	Clear -	6 30 - High water.
46) Feb. 7	Marion, of Wigton - -	Schooner	70	5	Liverpool to Westport -	Salt -	W.	11	Hazy -	1 A.M. - -
(47) „ 7	Jean, of Sligo - -	Schooner	72	5	Liverpool to Sligo - -	Salt -	W.	11	Hazy -	A.M. - -
(195) 1857. Aug. 16	Thomas, of St. John, N.B. -	Ship -	763	20	Glasgow to Halifax - -	Machinery	N.W.	2	Dense fog	8 0 A.M. -

ENTRANCE OF CLYDE.

Date of Casualty.	Name of Vessel. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind. Direction.	Wind. Force.	Weather.	Hour and Time of Tide.
(59) 1856. Feb. 12	Success, of Belfast - -	Schooner	51	3	Maryport to Belfast - -	Coals -	S.E.	6	Thick -	9 A.M. -
(155) 1857. Feb. 29	Elinor Grace, of N. Shields -	Brig -	224	8	Belfast to N. Shields - -	Ballast -	S.S.W.	9	Dark and hazy.	11 30 P.M. -
(44) 1856. Feb. 7	Lucy Neal, of Preston -	Brigantine	96	5	Ballina to Fleetwood -	Oats -	S.S.W.	12	Thick -	2 30 A.M. -
(45) „ 7	Martha, of Neath - -	Ketch -	78	6	Neath to Troon - -	Timber -	S.S.W.	12	Thick -	12 30 - -
(42) „ 6	Clyde Vale, of Glasgow -	Smack -	49	4	Glasgow to Port Ellen -	Barley -	W.N.W.	10	Hazy -	High water -
(51) Feb. 12	J. G. Hall, of Yarmouth, N.S.	Brig -	275	10	Ardrossan to Corfu - -	Coals -	S.E.	6	Thick -	2 15 A.M. -
(82) May 17	Harriet, of Londonderry -	Schooner	76	5	Londonderry to Loch Gilphead.	Oatmeal -	N.W.	7	Thick -	10 P.M. - High water.
(110) Nov. 26	Sker, of Dublin - -	Schooner	57	5	Ardrossan to Dublin -	Coals -	S.	6	Snow storm	12 30 A.M. -

Cork inclusive, and on the Coasts of Islay and Kintyre, during the Years 1856 and 1857—*continued.*

RATHLIN ISLAND.

sel's Age and w classed loyd's List. 13.	Vessel. Estimated Loss on. 14.	Vessel. Insured for, and where. 15.	Cargo. Estimated Loss on. 16.	Cargo. Insured for, and where. 17.	Lives lost. 18.	Number of Lives saved, and by what Means. 19.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage. 20.	Site and Cause of Casualty. — Remarks. 21.	Authority. 22.
onths . 1.	£5,000	Unknown	Unknown	Unknown	Nil	-	Wrecked	in Achill Bay, Island of Rathlin; thick weather; blowing strong; no light seen together with strong flood tide, and the compass said to be two points astray.	Wr. 1718 „ 1722 „ 1775
rs 1.	Unknown	Unknown	Unknown	Unknown	None	-	Stranded	off Rathlin Island in a dense fog; saw land only two ships' lengths ahead. Hove all aback; came off; making too much water to proceed; put into Troon for repairs and discharge. No. soundings to be got.	Wr. 1772
rs 2.	Unknown	£,1000	Unknown	Unknown	None	-	Stranded	N.W. side Rathlin Island in a dense fog. Lead was hove not more than half an hour before striking. Got off, and put back to Greenock for repairs.	Wr. 1764

ISLAY.

sel's Age and w classed loyd's List. 13.	Vessel. Estimated Loss on. 14.	Vessel. Insured for, and where. 15.	Cargo. Estimated Loss on. 16.	Cargo. Insured for, and where. 17.	Lives lost. 18.	Number of Lives saved, and by what Means. 19.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage. 20.	Site and Cause of Casualty. — Remarks. 21.	Authority. 22.
rs l.	-	-	-	-	None	-	Stranded	on Sound of Neve Island, Islay; very greatly damaged; bottom knocked out; masts and sails gone, and cargo discharged on beach; stress of weather. Total loss.	Dep. 646 Wr. 646
ars	-	-	-	-	None	-	Stranded	at Ardley, Islay; drove during the gale on a reef of rocks; then slipped, and beat over reef, after striking heavily, and tearing away keel.	Wr. 656
ars	-	-	-	-	None	-	Stranded	at Ardley, Islay, by stress of weather; driven on a beach, high and dry; cargo discharged in attempts to get her off.	Wr. 645
nths, 8 years	Unknown	Unknown	Unknown	Unknown	None	-	Stranded	on Ardnahow Point, Sound of Islay; stress of weather; wind blowing a hurricane; drove her on rocks, where she filled, listed, and fell over; will be recovered.	Dep. & Wr. 1019
rs	Unknown	Unknown	Unknown	Unknown	None	-	Stranded	on Lochindail, Islay, by stress of weather; parted from best anchor, dragged the rest, and drove on the beach; cargo must be discharged,	W 647
rs	Unknown	Unknown	Unknown	Unknown	None	-	Stranded	on Lochindail, Islay; parted both anchors in a heavy gale; drove on the beach, and cargo must be discharged before she can be got off.	Wr. 647
rs t.	Unknown	Unknown	Unknown	Unknown	None	-	Wrecked	off the Ruins of Islay; very thick fog. Vessel well in hand; very strong currents. Lead frequently hove. Vessel struck and became total wreck; bilged, and back broken.	Wr. 1792

ENTRANCE OF CLYDE.

sel's Age and w classed loyd's List. 13.	Vessel. Estimated Loss on. 14.	Vessel. Insured for, and where. 15.	Cargo. Estimated Loss on. 16.	Cargo. Insured for, and where. 17.	Lives lost. 18.	Number of Lives saved, and by what Means. 19.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage. 20.	Site and Cause of Casualty. — Remarks. 21.	Authority. 22.
own	£300	Unknown	£35	Unknown	1	2, in smack	Wrecked	in Stramore Bay, Campbelton; the mainsail having been carried away, vessel unmanageable by stress of weather. Total loss.	Wr. 456 Dep. 456
rs	Unknown	Unknown	Unknown	Unknown	1	-	Wrecked	on Staimish Beg, Mull of Oe; dark weather and strong currents; went on the rocks, bilged on both sides, full of water, and first gale of wind must break up.	Wr. 852
ars	£100	Unknown	None	Unknown	None	-	Stranded	on mainland, in Sound of Gigha, during a hurricane; nearly on her beam ends; may be got off.	Wr. 429
-	£20	-	£20	-	-	-	Stranded	on French Point, inside Campbelton Loch, during a hurricane; may be got off.	Wr. 428
nths	Unknown	Unknown	Unknown	Unknown	None	-	Stranded Partial.	by stress of weather; broke adrift from her moorings by a hurricane, and driven high on a sandy beach; cargo discharged.	Wr. 644
ears t classed.	£2,750	Unknown	£200	Unknown	None	All, in ship's boat	Wrecked	on Carskragk, Campbelton; very thick weather, and deceived by strong tide; bottom knocked in, and cargo washed out; no lead hove. Total loss.	Wr. 456 Dep. 457
ars	-	Unknown	Unknown	Unknown	None	-	Stranded	on Island of Devar, near entrance to Campbelton Bay; while tacking for shelter missed stays, and not being able to wear round ran ashore; will be got off on cargo being discharged.	Wr. 1856
ars t.	-	Not	£20	Unknown	None	-	Stranded	on Island of Devar, near Campbelton Bay, being heavy snow storm, and night very dark; got off after discharging 40 tons of cargo.	Wr. 2526

Vessels in Distress (otherwise than by Collision) on the N., N.E., E., and S.E. Coasts of Ireland, from

Date of Casualty. 1.	Name of Vessel. — Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. — Bound to. 6.	Cargo. 7.	Wind.		Weather. 10.	Hour and Time of Tide. 11.
							Direction. 8.	Force. 9.		

MULL OF CANTYRE.

Date of Casualty.	Name of Vessel.	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Direction.	Force.	Weather.	Hour and Time of Tide.
1856. (38) Feb. 6	Hope, of Belfast - -	Brig -	148	7	Londonderry to Belfast -	Ballast -	W.S.W.	10	Hazy -	10 30 P.M. -
1857. (192) Aug. 13	Trial, of Carnarvon - -	Schooner	63	5	Liverpool to Wick - -	Salt -	S. by E.	4	Dense fog	4 A.M. - -
(193) „ 13	Cuthberts, of Greenock -	Barque -	852	26	Greenock to Quebec - -	Coals -	S. by E.	4	Dense fog	6 A.M. - -
(190) „ 3	Margaret, of Belfast -	Smack -	31	3	Portrush to Troon - -	Ballast -	S.S.W.	6	Cloudy -	7 A.M. - -
(211) Oct. 16	Ann and Susan, of Carnarvon	Schooner	41	4	Bangor to Portrush -	Slates -	S.E.	3	Thick -	7 P.M. - -

BALLYCASTLE.

Date of Casualty.	Name of Vessel.	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Direction.	Force.	Weather.	Hour and Time of Tide.
(159) Mar. 12	Blonde, of Belfast - -	Smack -	19	3	Belfast to Rathmellen -	General -	N.E.	10	Squally -	9 P.M. - -
1856. (18) Jan. 11	Vulcan, of Glasgow - -	Schooner	67	6	Glasgow to —— - -	Kelp -	N.	4	Fine -	9 30 A.M. High water.
(23) „ 15	Norfolk, of Sligo - -	Brig -	116	8	Sligo to Liverpool - -	Oatmeal -	S.E.	6	Cloudy -	10 P.M. - -

FAIRHEAD TO BELFAST.

Date of Casualty.	Name of Vessel.	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Direction.	Force.	Weather.	Hour and Time of Tide.
(95) Sept. 26	Thomas Mason, of Bangor -	Schooner	51	4	Bangor to Londonderry -	Slates -	E.S.E.	10	Thick -	9 45 - -
(85) July 5	George A. Hoply, of Charleston.	Ship -	549	16	Liverpool to Charleston -	General -	N.	10	Squally - Cloudy.	12 midnight -
1857. (210) Oct. 9	Henrietta, of Dantzic -	Brig -	293	10	Glasgow to Stettin - -	Iron -	W.N.W.	8	Thick and rainy.	8 A.M. -
(209) „ 7	Brothers, of Redbay -	Smack -	53	3	Ayr to Londonderry -	Coals -	E.	9	Thick, with rain.	- - -
(205) Sept. 24	Hope, of Newry - -	Sloop -	42	3	Scotland to Newry - -	Coals -	N.W.	8	7 -	6 P.M. -
(157) Mar. 8	Stag, S.S., of Glasgow -	S.S. -	314	28	Glasgow to Belfast - -	General, and 92 Passengers.	N.W.	9	Snow storm.	4 30 A.M. -
1856. (54) Feb. 13	Queen, of Belfast - -	Brig -	88	5	Troon to Belfast - -	Coals -	S.S.E.	9	Thick -	Low water -
(30) Jan. 21	Airdrie, of Glasgow - -	Schooner	95	5	Clyde to Oporto - -	Iron -	S.E.	9	Clear -	9 15 P.M. -
(115) Oct. 26	Lenggarten, of Dantzig -	Ship -	624	17	Quebec to Belfast - -	Timber -	S.E.	10	Thick and rain.	11 P.M. -

BELFAST.

Date of Casualty.	Name of Vessel.	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Direction.	Force.	Weather.	Hour and Time of Tide.
1857. (177) Mar. 29	Commerce, of Ayr - -	Brig -	110	5	Ayr to Dublin - -	Coals -	E.	9	Fresh and hazy.	2 30 A.M. -
(178) April 12	Banshee, of Glasgow -	Schooner	36	3	Troon to Belfast - -	Coals -	S.E.	7	Thick -	2 P.M. -

ɔork inclusive, and on the Coasts of Islay and Kintyre, during the Years 1856 and 1857—*continued.*

sel's Age and w classed oyd's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, nd whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. ——— Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
MULL OF CANTYRE.									
ırs -	Unknown	Unknown -	Unknown	Unknown	None -	All - - -	Dismasted	and otherwise damaged 10 miles S. of Mull of Cantyre; vessel labouring heavily, was struck by a sea that laid her on her beam ends; towed into Ayr.	Wr. 381
own - . Lloyd's.	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Stranded	in Mull of Cantyre, in a dense fog and strong tide. Rudder unshipped. Lead not hove; not supposed to be near the land.	Wr. 1728
's - - known.	Unknown	Unknown	Unknown	Unknown	None -	- - - -	Stranded	on Mull of Cantyre, in a dense fog. Rudder unshipped. Strong tides. Put ship ashore. Lead had been hove.	Wr. 1737
ırs - -	£150 -	Not - -	Unknown	Unknown	None -	3, by "Mary" of Ramsay.	Foundered	8 miles from lighthouse in the Mull of Cantyre. Weather heavy; sprung a leak; which could not be kept under; sunk. Total loss.	Wr. 1705
ırs - - 1* Æ 1.	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Stranded	in Cariska Bay, near Mull of Cantyre. Night dark, and weather thick, and the master unacquainted with the shore.	Wr. 2181
BALLYCASTLE.									
- -	Unknown	Not - -	Unknown	London -	None -	- - - -	Wrecked	off Ballycastle. Night very dark and missed anchorage; struck among the loose rocks at end of pier; capsized and became a total wreck.	Wr. 865
rs -	£1,200 -	Unknown -	£200 -	Unknown	- -	All - - -	Wrecked	on Port Watty, Ballycastle Bay; missed stays, and having stem way struck on the rocks. Total loss.	Wr. 125 Dep. 200
rs - -	£800 -	Unknown -	£2,860 -	Unknown	None -	All - - -	Wrecked	S. of Redbay Pier, Ballycastle; anchored in bad berth; hove in the larboard chain while vessel listed fast to port; went over on her beam ends and sunk.	Wr. 183 „ 2324 „ 2229 Dep. 188 „ 877 „ 536 } 56
FAIRHEAD TO BELFAST.									
rs - -	Unknown	Bangor - -	Unknown	Unknown	None -	- - - -	Stranded	near Ballywater, standing to northward; wind headed, and put her on lee shore; wind increasing to heavy gale, could not get off on either tack; to save life, run for beach, and got into Ballywater Harbour with loss of stern-post.	Wr. 1932 „ 2229
rs -	£6,000 -	England and America. £6,000.	Unknown	Unknown	None -	8 by fishing boats, 8 by our boats.	Wrecked	on the West Strand at Port Stewart, county Antrim, in consequence of the suddenness of the gale and shift of wind; the vessel was embayed, and could not work off shore, having lost her canvas. Total loss.	Wr. 1573 „ 581
rs -	£1,000 -	Hamburgh -	£2,000 -	Unknown	None -	- - - -	Wrecked	on Eskard Rocks, near Ton Head, county Antrim. Sea broke over her with such violence that she sprung a leak; which increasing fast, ran her ashore, and she became total wreck.	Wr. 2086
ɔwn -	£200 -	Not - -	£200 -	Not -	None -	3, by ropes from shore	Wrecked	on Blind Burn, Cushenden. Lost sails in the gale; strained, drifted on the rocks, and became total loss.	Wr. 2128
- -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Foundered	off the Maiden Rocks; having sprung a leak which could not be kept under, and sunk.	Wr. 1985
s - -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Stranded	on Blackhead, in a snow storm; passed the Maidens; believed her to be abreast of Blackhead; saw land on starboard bow; starboarded helm, but struck on rocks; immediately got off, and into Belfast.	Wr. 838 „ 890
ɔwn -	Total -	Unknown -	Total -	Unknown	None -	All, by lighthouse keeper.	Wrecked	on Maiden Lights S. Rock, Carrickfergus, and broke up; stress of weather and fog, crew got into boat, which was stove in on rocks, and were saved by lighthouse keeper. Total loss.	Wr. 480
s - -	- -	- - -	- -	- -	None -	5, in own boats -	Wrecked	abreast of Carrickfergus, sprung a leak and became unmanageable, and sunk head first in 6½ fathoms. Total loss.	Wr. 211 „ 278
ths -	Not known	Unknown -	Unknown	Liverpool	None -	- - - -	Wrecked	on the west Bank of Whitehouse, Carrickfergus; thick weather.	Wr. 1960 „ 1045
BELFAST.									
ɔwn -	Unknown	Not - -	Unknown	Unknown	None -	- - - -	Wrecked	at Mill Isle, Belfast. Passing through the Copelands the vessel struck on a shoal called the Bridges, and springing a leak was forced to run ashore a complete wreck, were she now lies.	Wr. 1083 „ 1069
ɔwn -	Unknown	Not - -	Unknown	Not -	None -	- - - -	Stranded	on rocks off Mill Isle at 2 o'clock, and remained high and dry at low water. Got off by coastguard.	Wr. 1390

Vessels in Distress (otherwise than by Collision) on the N., N.E., E., and S.E. COASTS of IRELAND, from

Date of Casualty. 1.	Name of Vessel. — Port of Registry (if known.) 2.	Rig. 3.	Tons. 4.	Men. 5.	From. — Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.
1857. (166) Mar. 14	Robina, of Glasgow	Schooner	134	7	Cadiz to Belfast	Wine	S.W.	11	Cloudy	2 A.M.
(182) May 1	Harriet Wyld, of Ramsay	Barque	202	8	Liverpool to Quebec	Salt	S.S.W.	5	-	-
1856. (90) Aug. 10	Flora, of Drogheda	Brig	100	6	Ardrossan to Fleetwood	Pig iron	E.	6	Thick, with rain.	11 P.M.
1857. (189) July 18	Choice, of Belfast	Brig	225	9	Troon to Constantinople	Coals	S	-	Fine	-
1856. (144) Dec. 20	Avance, of Sandsvell	Brig	230	9	Belfast to Liverpool	Ballast	W.	2	Clear	-
1857. (170) Mar. 20	Mary Jane, of Lancaster	Schooner	155	7	East Tarbert to Glasson Dock	Pig iron	E.S.E.	8	Thick	-
(171) „ 20	Perseverance, of Belfast	Schooner	98	5	Troon to Cork	Coals	S.S.E.	8	Thick, with rain.	11 P.M.
(213) Oct. 22	Betsey, of Belfast	Schooner	56	4	Belfast to Maryport	Ballast	N.	6	Rainy	9 P.M.
1856. (101) Sept. 28	Martin, of Belfast	Schooner	64	4	Maryport to Larne	Coals	N.E.	12	Dark	Low water
1857. (168) Mar. 17	Isabella and Jane, of Bangor	Schooner	62	4	Bangor to Belfast	Ballast	S.S.W.	8	Hazy, with rain.	1 P.M.
(220) Nov. 28	Lydia, of Fowey	Brigantine	107	6	Ardrossan to Havre	Iron	S.S.W.	5	Thick	11 30 P.M.
1856. (96) Sept. 27	Brothers, of Kingstown	Brig	120	6	Kingstown to Whitehaven	Ballast	E.S.E.	10	Thick	9 30
(121) Nov. 30	Scotia, of Carnarvon	Schooner	55	4	Glasgow to Carnarvon	Iron	N.E.	8	Thick and snowy.	6 A.M.
(84) June 19	Port, of Maryport	Brigantine	65	4	Maryport to Dublin	Coals	N.E.	8	Thick	2 3 P.M.
1857. (146) Jan. 2	Castilian Maid, Wick	Schooner	93	6	Bangor to Lossiemouth	Slates	W. by S.	7	Hazy	12 30 A.M.
(173) Mar. 21	Janet, of Ardglass	Sloop	37	2	Dumfries to Tarbert	Grain	E.S.E.	9	Clear	12 5 A.M.
1856. (76) April 26	Friends, of Glasgow	Sloop	35	3	Bowling Bay to Belfast	Coals	N.E.	2	Hazy	High water
(77) „ 26	Jeanies, of Belfast	Schooner	80	4	Maryport to Belfast	Coals	N.E.	4	Thick haze	High water
1857. (206) Sept. 25	Corval, of Belfast	Smack	24	3	Larne to Strangford	Lime	N.E.	5	Moderate	2 30 P.M.
(191) Aug. 12	Waterloo, of Belfast	S.S.	328	24	Liverpool to Belfast	General	S.	3	Dense fog	1 45 A.M.
1856. (83) May 20	Commodore, of Greenock	Smack	36	3	Liverpool to Dunfanaghy	General	S.E.	Light	Fine	4 30 P.M. High water

: inclusive, and on the Coasts of Islay and Kintyre, during the Years 1856 and 1857—*continued.*

Age sed List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. — Remarks.	Authority.
	Estimated Loss on. 14.	Insured for, and where. 15.	Estimated Loss on. 16.	Insured for, and where. 17.	18.	19.	20.	21.	22.
-	Unknown	Unknown -	Unknown	Unknown	1	6 - - -	Dismasted	and sails blown away; decks swept, and cabin destroyed, and everything moveable carried away in heavy gale; man at wheel washed overboard. Put into Belfast to discharge and repair.	Wr. 1168 „ 1293
-	Unknown	Not - -	Unknown	Unknown	None -	- - - -	Leaky	off Belfast. Put in; made for Ramsay; shipped new crew; made 17 in. water per hour. Started again at command of owners; and vessel manifesting signs of settling, put back again to save life.	Wr. 1430
-	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Leaky	off Mull of Galloway; heavy cross sea running; weather very squally; put into Belfast to discharge and repair.	Wr. 1719
-	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Leaky	in 9° 3′ W. and 55° 40′ N.; pumps incessantly worked; could not keep her free; made for Belfast Harbour to discharge cargo and free the vessel.	Wr. 1685
-	- -	- - -	- -	- -	None -	- - - -	Stranded	on Ballyfern Point, through the ignorance of an unlicensed pilot.	Wr. 2825
-	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Wrecked	on Crawford's Brun, 3 miles of Bangor, Ireland. Mistaking lighthouse for a vessel, the weather being very thick, got ashore; may be got off.	Wr. 977 „ 952
-	Unknown	Not - -	Unknown	Not -	None -	- - - -	Wrecked	in Bangor Bay, Donaghadee. Got on rocks through stress of weather; blowing very hard, and being very thick.	Wr. 1031 „ 969
-	£100 -	Not - -	Nil -	Nil -	None -	- - - -	Stranded	on Lukespoint, Bangor, Ireland. Missed stays; tried to anchor, but heavy sea running, she was thrown on the rocks. May be got off.	Wr. 2328
-	£400 -	Not - -	£50 -	Not -	2	3, by coast guard boat and fishermen.	Wrecked	off Ballycormick Point by stress of weather; saw the Copelands, but was in doubt as to its being that light. Total loss.	Dep. 125 Wr. 2211
-	£300 -	Nil - -	Nil -	Nil -	None -	- - - -	Stranded	at Orloch Head while in tow of tug S.S., which got her off; she capsized, and rope breaking, and sea running high, she drifted on shore under Whitehead. Since got off and towed into Belfast.	Wr. 916
-	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Stranded	on Skull Martin Rock, off Ballywater. Weather thick; could not see the Copeland Lights. Got off very leaky and put into Dublin.	Wr. 2479
-	Unknown	Not - -	Unknown	Unknown	None -	6, by coast guard boat.	Stranded	on Skull Martin Rocks, standing to the northward; wind headed; put her on a lee shore, and wind increasing to heavy gale, could not get off on either tack; floated off, and taken into Ballywater Harbour much damaged.	Wr. 1933 „ 2229
:h. -	Unknown	£500 - Bangor. -	Trifling -	Unknown	None -	- - - -	Stranded	on the Scull Martin Rocks, through deviation of compass, being laden with iron; weather at the time thick, which prevented Copeland Light being seen; considerably damaged.	Wr. 2554 „ 2569
-	Considerable.	Unknown -	None -	Unknown	None -	4, in own boat and coast guard.	Stranded	on Ship Rock, 1 mile E.N.E. of Ballyferris Point; thick weather; no land in sight since noon; lead not hove; compasses supposed to have been affected by attraction.	Wr. 1451 Donaghadee.
-	Unknown	Unknown -	Unknown	Unknown	- -	- - - -	Stranded	on rocks near S. light, Belfast (Ballyferris Point), through the misconception of the master as to his distance from the light owing to the hazy weather; got off and discharged for repairs.	Dep. 20 „ 469
-	£250 -	Not - -	Unknown	Yes -	None -	- - - -	Wrecked	in Temple Patrick Bay, 1½ miles S. of Donaghadee. Carried away main boom in a lee shore, and being improperly manned became a total wreck.	Wr. 977
- -	£160 -	Not - -	£25 -	Unknown	None -	3, by own boat	Wrecked	on McCammon Rocks in Portavagie Bay, Donaghadee; hazy weather, and was drifted south by the tide more than allowed for; went to pieces.	Dep. and Wr. 1248 „ 1234
-	£200 -	Unknown -	£40 -	Unknown	None -	4, by coast guard and fishing boat.	Wrecked	on the Long Rock, 1 mile N.E. of Ballywalterspin, Donaghadee, the weather being very thick, and not enough allowance made for the tide.	Wr. 1248
-	£150 -	None - -	£30 -	Not -	None -	- - - -	Burned	off Port Langham. The vessel having got on the rocks through the negligence of the pilot; water mixed with the lime, and the vessel took fire and was destroyed.	Wr. 1909
-	Unknown	Yes - -	Unknown	Unknown	None -	- - - -	Stranded	in Burr Point, Ballyhalbert, in a thick fog. Discharged cargo, and was towed off; bilged in several places. Lead not hove.	Wr. 1749 „ 1731
-	£5 -	Unknown -	£50 -	£200 - London.	No -	- - - -	Stranded	on Green Island, Dunfanaghy, and very light; helm would not answer nor keep her away; got off after discharging cargo.	Wr. 1436

Vessels in Distress (otherwise than by Collision) on the N., N.E., E., and S.E. Coasts of Ireland, from

Date of Casualty.	Name of Vessel. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind.		Weather.	Hour and Time of Tide.
							Direction.	Force.		
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
					LOUGH STRANGFORD.					
1856. (109) Oct. 6	Sally, of Strangford	Smack	28	3	Whitehaven to Ardglass	Coals	S.W.	9	Unknown	8 P.M.
(113) „ 22	Harriett Matilda, of Belfast	Schooner	32	3	Larne to Killebagh	Lime	S.E.	Mod.	Thick	6 P.M.
1857. (147) Jan. 4	Lion, of Strangford	Brig	87	5	Workington to Strangford	Coals	E.N.E.	9	Boisterous	2 P.M.
1856. (80) May 6	Spray, of Belfast	Schooner	50	4	Glasgow to Strangford	Coals	S.E.	9	Thick	10 A.M.
(114) Oct. 23	Robert E. Ward, of Newry	Schooner	72	4	Troon to Castlepen	Coals	S.S.E.	5	Thick	-
1857. (225) Dec. 26	Thetis, of Strangford	Schooner	58	4	Glasgow to Dundrum	Coals	N.W.	1	Thick	10 P.M.
					DUNDRUM BAY.					
1856. (75) April 5	Nautilus, of Killough	Smack	33	3	Dundalk to Killough	Oatmeal	S.W.	9	Thick	10 P.M. High water.
1857. (201) Sept. 15	James Gibb, of London	Barque	813	20	Quebec to Greenock	Timber	-	8	-	-
(151) Jan. 29	Fingalton, of Hartlepool	Barque	860	23	Liverpool to Shields	Salt	S.W.	9	Squalls, wind, and rain.	6 30 P.M.
(176) Mar. 29	Flying Fish, of London	Smack	44	5	Plymouth to Belfast	Ballast	E.S.E.	8	Rain	4 30 A.M.
					LOUGH CARLINGFORD.					
1856. (91) Aug. 10	Fruiterer, of Drogheda	Schooner	62	4	Whitehaven to Dunany	Coals	S.	6	S.	-
(126) Dec. 5	Princess, of Newry	Barque	479	19	Quebec to Newry	Timber	S.S.W.	7	Foggy	6 30 P.M.
1857. (202) Sept. 15	Sarah, of Liverpool	Schooner	40	4	Newry to Preston	Wheat	W.	2	Variable	8 30 A.M.
					DUNDALK.					
1856. (3) Jan. 3	Liska, of Dundalk	Schooner	60	4	Dundalk to Lancaster	Grain	S.E.	9	Thick	High water
(1) „ 2	Catherine, of Fleetwood	Schooner	69	5	Dundalk to Lancaster	Oatmeal	E.N.E.	9	Thick	High water
(2) „ 2	British Token, of Dundalk	Schooner	54	4	Dundalk to Preston	Grain	S.E.	9	Thick	6 A.M. High water
					DROGHEDA.					
(31) Jan. 22	Independence, of Bath, U.S.	Ship	1,300	30	Liverpool to New Orleans	Salt	E.	10	Clear	3 A.M.
(100) Sept. 27	Irene, of Maryport	Brig	129	6	Bactouche to Ireland	Timber	E.	10	Hazy	11 A.M.

inclusive, and on the Coasts of Islay and Kintyre, during the Years 1856 and 1857—*continued.*

LOUGH STRANGFORD.

ɩge ed List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. —— Remarks.	Authority.
	Estimated Loss on. 14.	Insured for, and where. 15.	Estimated Loss on. 16.	Insured for, and where. 17.	18.	19.	20.	21.	22.
	Unknown	Not	Unknown	Unknown	None	-	Wrecked	at Strangford; running into Ardglass, it came on to blow so hard that she struck the pier head and went on the rocks, shortly after going to pieces.	Dep. 2094
	£180	Not	£30	Not	No	3, by a boat	Wrecked	on Barhall Rocks, Carstoun Point, Strangford Lough, in consequence of a thick fog; and want of light on Rock Angus.	Wr. 2281 „ 2320 „ 2303
	£700	£350	£55	Not	None	-	Wrecked	east side of N. Angus Rock, entrance to Strangford Lough, blowing a heavy gale; ship missed stays, let go anchor, but wind and tide drifted her on the rocks where she now lies.	Wr. 344
	£150	Unknown	Unknown	Unknown	None	-	Stranded	on the Rock Angus, near Strangford, when entering the harbour by stress of weather, and no light exhibited on shore to point out the danger: floated off after discharging cargo.	Wr. 1324 Dep. 1270 Wr. 1339
	£500	Not	£40	Not	None	4, by a boat	Wrecked	on Plaad's Lug Rock near the Beacon on Rock Angus, from the want of light on the rock,	Wr. 2320 „ 2319 „ 2303
	Nil	Unknown	Nil	Unknown	None	-	Stranded	on Barge's Rocks, off Mile Isle. Ran on shore in thick fog; lead not used.	Wr. 19/58

DUNDRUM BAY.

ɩge ed List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. —— Remarks.	Authority.
	Estimated Loss on. 14.	Insured for, and where. 15.	Estimated Loss on. 16.	Insured for, and where. 17.	18.	19.	20.	21.	22.
	£200	Nil	£600	£600 Dublin.	None	-	Wrecked	quarter mile N. of St. John's Point, county Down, having a rotten tiller, which broke off in rudder head when close in to the land; before stump could be got out, vessel ran on shore. Total loss.	Wr. 1074
	-	-	-	-	-	-	Stranded	off St. John's Point, Dundrum	Wr. 1877
	Unknown	Unknown	Unknown	Unknown	None	-	Stranded	quarter mile S. Tyrella Watchhouse, Dundrum Bay; got on shore owing to the great indraught of the current into Dundrum Bay.	Wr. 626
	£400	Not	Nil	Nil	None	-	Wrecked	half mile S. of Dundrum Bar. Got ashore from the thick state of the weather, and the great indraught into the Bay of Dundrum.	Wr. 1149

LOUGH CARLINGFORD.

ɩge ed List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. —— Remarks.	Authority.
	Estimated Loss on. 14.	Insured for, and where. 15.	Estimated Loss on. 16.	Insured for, and where. 17.	18.	19.	20.	21.	22.
d.	£350	Not	£60	Not	None	-	Wrecked	off Carlingford; should not have returned to Whitehaven, having sprung the masthead a few miles from thence; reported to have been lost by want of seamanship and negligence.	Wr. 1800
	Unknown	£2,000 St. John's.	Nil	Unknown	None	-	Stranded	on O'Meath shore, 2 miles past Warrenpoint; broached too in heavy squall, and as clearing up main top-sail, helm hard a port, took the ground; remains much logged and full of water.	Wr. 2638
	£50	Not	£200	Lloyd's	None	-	Stranded	at Narrow Water Castle, Newry. Struck on rocky ground going down the river: not sufficient water at the time of tide.	Wr. 2983

DUNDALK.

ɩge ed List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. —— Remarks.	Authority.
	Estimated Loss on. 14.	Insured for, and where. 15.	Estimated Loss on. 16.	Insured for, and where. 17.	18.	19.	20.	21.	22.
d.	£2	Nil	£28	Unknown	None	All	Stranded	on the bank near Dundalk. Lost sight of lighthouse, and ran out of river. Would not have occurred had there been a light on Perches.	Dep. 105 Wr. 179
	£100	£400 London.	£50	£280 Dundalk.	None	All	Stranded	on the North Bull, and run into Dundalk leaky; cargo discharged. Want of lighthouse on the Perches.	Dep. 104 Wr. 179
	£100	Not	£100	£50 Dundalk.	None	All	Wrecked	on the North Bull; got off, and went into Dundalk for repairs. Cargo discharged. Want of light on Perches.	Dep. 106 Wr. 178

DROGHEDA.

ɩge ed List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. —— Remarks.	Authority.
	Estimated Loss on. 14.	Insured for, and where. 15.	Estimated Loss on. 16.	Insured for, and where. 17.	18.	19.	20.	21.	22.
d.	£12,000	Unknown. Said in Boston.	£200	Unknown	None	All; picked up by "Faugh a Ballagh" S.S.	Wrecked	quarter mile N. of Nanny Water River, Drogheda; according to mate, ship run W.N.W. course 115 miles in seven hours, while log only gave 10 miles an hour; ship lost by error in time and reckoning, as well as error in judgment; will be recovered; towed into Liverpool, March 11.	Wr. 221 „ 281 S.G. Feb. 13. „ Mar. 12.
	Unknown	Unknown	Unknown	Unknown	None	-	Stranded	on Lagtoun Strand, Drogheda; heavy gale and thick fog; lead hove; unavoidable.	Wr. 1969 „ 1995

Vessels in Distress (otherwise than by Collision) on the N., N.E., E., and S.E. COASTS of IRELAND, from

Date of Casualty.	Name of Vessel. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind. Direction.	Wind. Force.	Weather.	Hour and Time of Tide.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1856. (116) Oct. 27	Endeavour, of Drogheda	Brig	99	6	Drogheda to Ayr	Limestone	S	5	Fine	6 P.M.
(118) Nov. 10	John, of Belfast	Brig	134	8	Archangel to Belfast	Tar	N.N.W.	10	Dark	4 30 P.M.
(102) Sept. 28	Wanderer, of Liverpool	Schooner	80	5	Unknown	Coal	E.N.E.	11	Rainy and heavy.	7 30 A.M.

HOWTH TO WICKLOW.

Date of Casualty.	Name of Vessel. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind. Direction.	Wind. Force.	Weather.	Hour and Time of Tide.
(117) Oct. 30	Eliza, of Dundee	Brig	245	11	Liverpool to Genoa	General	S.W.	8	Thick	8 A.M.
1857. (219) Nov. 19	Sir Charles Napier, of London	Ship	630	19	Liverpool to Sierra Leone	General	S.S.E.	6	Hazy	5 30 A.M.
1856. (97) Sept. 27	Greyhound, of Douglas	Schooner	76	6	Lisbon to Douglas	Cork	E.N.E.	10	Thick	A.M.
1857. (216) Oct. 29	Ellen, of Aberystwith	Schooner	42	4	Llanelly to Dundalk	Coal	N.N.W.	8	Gales	10 30 P.M.
(226) Dec. 27	Vron, of Nevin	Schooner	78	5	Glasgow to Rouen	Iron	N.W.	1	Thick	7 P.M.
1856. (16) Jan. 11	Shamrock, of Kingstown	Smack	20	2	Skerries to Kingstown	Ballast	N.	6	Clear	¼ ebb
(104) Sept. 28	Robert and Mary of ——	Smack	39	3	Whitehaven to Dunmany	Coals	E.N.E.	10	Thick	Noon
(53) Feb. 12	Margina, of Holland	Galliot	90	5	Liverpool to Seville	Machinery	S.E.	11	Thick	2 A.M. High water
(78) April 27	Patrick, of Wicklow	Smack	12	2	Howth to Wicklow	Stone	N.E. by E.	6	Thick	1 A.M.
(105) Sept. 28	St. Mary, of Dublin	Brig	136	7 1 pasr.	Llanelly to Dublin	Coals	N.E.	9	Thick and hazy.	3 30 A.M.
(103) „ 28	Higginson, of Carnarvon	Barque	453	14	Quebec to Wicklow	Timber	N.E.	10	Thick	10 A.M.
(136) Dec. 9	Catherine, of Liverpool	Ship	400	16	Gibraltar to St. Domingo	Coals and merchandise.	W.S.W.	11	-	-

ARKLOW TO WEXFORD.

Date of Casualty.	Name of Vessel. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind. Direction.	Wind. Force.	Weather.	Hour and Time of Tide.
(28) Jan. 20	Horizon, of Kennebank	Ship	1,117	23	Liverpool to New Orleans	General	S.S.W.	6	Very thick	7 30 P.M. High water
(81) May 7	Racer, of New York	Ship	1,669	50	Liverpool to New York	General	E.S.E.	6	Thick, with rain.	2 A.M.
(92) Aug. 25	Henry Holman, of Plymouth	Schooner	158	8	Smyrna to Liverpool	Valonia	E.N.E.	9	Hazy	1 30 P.M.
(106) Oct. 1	Pelican, of Drogheda	Brig 1.	80	5	Barrow to Cardiff	Iron	S.	10	Thick	14 hours
(108) „ 6	Abeona, of St. John	Schooner	62	5	Sackville to St. John's	Deals	E.S.E.	9	Thick	6 A.M.
1857. (207) Sept. 30	Shannon, of Arklow	Smack	49	4	Gorey to Arklow	Ballast	S.E.	8	Thick	12 30
(217) Nov. 5	Brill, of Nova Scotia	Brig	234	9	Glasgow to Marseilles	Iron	S.S.M.	4	Thick	5 15 A.M.
1856. (93) Aug. 28	Rover, of Wexford	Schooner	79	6	Ayr to Wexford	Coals	S.S.W.	6	Thick and rainy.	2 A.M.
(17) Jan. 11	Alexander, of Waterford	Schooner	164	9	Liverpool to Barcelona	General	N.E.	5	Clear	1 45 A.M. Ebb.

k inclusive, and on the Coasts of Islay and Kintyre, during the Years 1856 and 1857—*continued.*

Age d ssed s List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. — Remarks.	Authority.
	Estimated Loss on. 14.	Insured for, and where. 15.	Estimated Loss on. 16.	Insured for, and where. 17.	18.	19.	20.	21.	22.
-	£50	Not	None	Not	None	-	Burned	at Drogheda; loaded with limestone, which took fire; ship scuttled to quench it.	Wr. 2312 „ 10906 „ 2
-	Unknown	Unknown	Unknown	Unknown	None	-	Stranded	on rocks off Copeland, Drogheda	Dep. 2435 „ 2481
-	Unknown	Unknown	Unknown	Unknown	5	1	Wrecked	on north point of Colt Island; strong gales blowing, drifted rapidly among the rocks, and in less than 20 minutes became a total wreck.	Wr. 1921

HOWTH TO WICKLOW.

Age d ssed s List.	Vessel. Estimated Loss on. 14.	Vessel. Insured for, and where. 15.	Cargo. Estimated Loss on. 16.	Cargo. Insured for, and where. 17.	Lives lost. 18.	Number of Lives saved, and by what Means. 19.	Nature of Casualty. 20.	Site and Cause of Casualty. — Remarks. 21.	Authority. 22.
-	Unknown	Yes	Unknown	Unknown	None	-	Stranded	on the Kish Bank; sighted the Skerries; stood on port tack all night, and struck on the bank; got off by "Cambria," S.S.; vessel run much faster than shown by the log.	Wr. 2292
-	£3,000	-	£4,000	-	1	-	Wrecked	on the Kish Bank. Sea heavy on the bank; cut away masts; lead occasionally hove; weather thick.	Wr. 2418
-	£700	Not	£800	Yes	None	-	Stranded	on the West Pier, Dublin, and towed into the inner harbour; bilged; deck loaded with cork, so that the best bower anchor was rendered unserviceable.	Dep. 1906 „ 1897
-	Unknown	£390	Unknown	Not	None	-	Stranded	on St. Patrick's Island, Dublin. Got so far to leeward; and endeavouring to beat up, missed stays, and went on the rocks.	Wr. 2394
-	Unknown	Yes	Nil	Unknown	None	-	Stranded	at Ballferis Point; ran ashore in thick fog; lead not hove.	Wr. 19/58
-	£30	Nil	Unknown	Unknown	None	-	Stranded	on the Horrocks, west side Dublin Harbour; missed stays, and vessel drove on rocks.	Wr. 146
-	£250	Not	£30	Not	None	3	Stranded	outside the Eastern Pier, Kingstown; total wreck; terrific sea on; 3 lives.	Wr. 1897
-	Unknown	Holland	None	Unknown	None	-	Stranded	on Wicklow Sand Bank; sprung a leak; bore up for Holyhead, and run on ground in harbour to ascertain damage.	Dep. 459 Wr. 65
-	£20	No	£4	Not	1	1, by clinging to wreck	Wrecked	at entrance of Wicklow Harbour by stress of weather; had recognized Wicklow Head lights.	Wr. 1239
-	£750	£500 Dublin.	£100	Not	None	8, by ropes	Wrecked	quarter mile from mouth of harbour, Wicklow.	Wr. 2302
-	£3,000	£2,500 London.	Unknown	£700 London.	1	13, by pilots and others.	Wrecked	near the Pier, Wicklow. Total loss. Vessel at anchor in Wicklow Bay; heavy gale of wind drove 3 anchors down, and struck. One man thrown overboard, and crowned.	Wr. 1922
-	Unknown	£2,000	Unknown	Unknown	None	-	Stranded	in the River Liffey; parted from the anchors in a gale of wind.	Wr. 2756

ARKLOW TO WEXFORD.

Age d ssed s List.	Vessel. Estimated Loss on. 14.	Vessel. Insured for, and where. 15.	Cargo. Estimated Loss on. 16.	Cargo. Insured for, and where. 17.	Lives lost. 18.	Number of Lives saved, and by what Means. 19.	Nature of Casualty. 20.	Site and Cause of Casualty. — Remarks. 21.	Authority. 22.
-	£9,000	Unknown	Unknown	New Orleans.	None	23, by own boats	Wrecked	on Arklow Bank, weather very thick; crew finding vessel breaking up, took to boats and got safe into Arklow.	Wr. 202
-	£16,000	United States	Unknown	Unknown	1	627, by the Arklow fishing smacks.	Wrecked	on Arklow Banks, weather being thick and allowance not made for strong tides; the lead had not been hove; all passengers saved and part cargo.	Wr. 1296
-	Unknown	£1,800	None	Unknown	None	-	Dismasted	off Arklow; having lost rudder, and much damaged in gale of wind; cut away mainmast to prevent her getting on shore; and finally towed into Milford to discharge and repair.	Wr. 1768
-	£500	Not	£50	Unknown	None	5, by ropes from shore	Wrecked	quarter mile south of Watch House, 3 mile point, Arklow; blowing a heavy gale with a heavy sea; crew saved by exertions of coast guard.	Wr. 2223
-	Unknown	Yes Unknown.	Unknown	Yes Unknown.	None	-	Dismasted	off Arklow Banks; sails nearly all split, and carried away, and ship much strained; sea breaking on board in heavy gale of wind.	Wr. 2055
-	£100	Nil	Nil	Nil	None	4, by vessel from shore	Wrecked	on Arklow Strand. Having parted from her anchors, drove ashore, and went to pieces.	Wr. 2032
-	£800	£400	£120	Unknown	None	-	Stranded	on Arklow Bank. Weather very thick, and cargo having attracted the compass got on shore in a strong tide; split her keel and became leaky.	Wr. 2433
yd's. -	£200	Not	£80	Not	None	-	Stranded	on Button Rock, off Glascarright; want of a proper look out, and neglect in not heaving the lead sooner; partial loss.	Wr. 1787 „ 1806 „ 2025
Star. -	Unknown	Partly London.	Unknown	Unknown	None	All	Stranded	on Glasgowan Bank, Irish Channel; got off, and put into Waterford, leaky, to discharge cargo; seriously damaged.	Dep. 158 Wr. 173

Vessels in Distress (otherwise than by Collision) on the N., N.E., E., and S.E. Coasts of Ireland, from

Date of Casualty. 1.	Name of Vessel. — Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. — Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.
1856. (50) Feb. 12	Proteus, of Sheborne -	Barque -	273	13	Liverpool to Kingston, Jamaica.	General -	S.S.W.	9	Thick -	6 A.M.
12) Oct. 14	Irrawaddy. of Glasgow -	Ship -	414	21	Glasgow to Rangoon -	General -	S.S.E.	8	Thick -	9 30 - -
1857. (175) Mar. 28	Emperor, of Liverpool -	Barque -	368	16	Liverpool to Balna - -	General -	S.S.E.	6	Thick fog	2 P.M. - -
(179) April 17	Conquest, of St. John's -	Ship -	1,046	26	Liverpool to Quebec -	Salt -	S.S.E.	7	Thick, with rain.	7 30 A.M. -
1856. (37) Feb. 6	Spec, of Cork - -	Brig -	120	7	Cardiff to Cork - -	Coals -	S.W.	9	Thick -	12 A.M. - Dead low water

WEXFORD.

Date of Casualty. 1.	Name of Vessel. — Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. — Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.
(57) Feb. 18	Bear, of Wexford - -	Schooner	86	6	Liverpool to Wexford -	Grain -	S.E.	4	Fine -	3 30. 1 hour E.W.
(98) Sept. 27	Expert, of Wexford - -	Smack -	48	15	Llanelly to Wexford -	Coals -	S.S.E.	11	Thick -	½ flood.
(0) Oct. 7	Chance, Wexford - -	Brigantine	82	6	Newport to Wexford -	Coals -	E. by S.	9	Thick -	4 A.M.
(135) Dec. 9	Petronelle, of Ghent -	Barque -	300	12	Akyat to Ghent - -	Rice -	S.W.	8 Stormy & hasy.	Hazy -	- - -
1857. 12) Oct. 22	Vulcan, of Wexford -	Smack -	41	5	Wexford to Newport -	Ballast -	N. E.	5	Clear -	8 30 A.M. -
1856. (140) Dec. 12	Dione, of Stettin - -	Brig -	256	10	Cardiff to Bordeaux -	Coals -	S.S.W.	10	Hazy -	3 P.M. - -

WEXFORD TO TUSKAR.

Date of Casualty. 1.	Name of Vessel. — Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. — Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.
(7) Jan. 6	Elvira, of St. Sebastia -	Brig -	191	12	Liverpool to Havannah -	General -	E.S.E.	5	Very dark and thick.	9 30 - -
(99) Sept. 27	Helena, of Cork - -	Cutter -	35	4 and 8 passrs.	Cork to Cardiff - -	Grain -	S.S.E.	11	Thick -	2 A.M. -
1857. (152) Feb. 16	Chattahooechoe, of Savannah	Ship -	1,115	27	Liverpool to Savannah -	Salt -	S.S.E.	5	Thick -	7 15 P.M. -
1856. (122) Dec. 2	Elizabeth Martin, of Dumfries	Barque -	414	16	Liverpool to Singapore -	General -	N.	5	Clear -	11 A.M. - -
1857. (172) Mar. 20	Gannett, of Cork - -	S.S. -	287	17	Liverpool to Rotterdam -	General -	S.E.	10	Cloudy -	- - -
(214) Oct. 23	Driving Mist, of London -	Snow -	185	9	Rio Grande to Liverpool -	Bones -	N.E.	11	Cloudy -	- - -
1856. Aug. 10	George, of Leith - -	Barque -	676	20	Liverpool to Quebec -	Salt -	S. ½ E.	6	Hazy, rainy, and squally.	4 P.M. -
(127) Dec. 6	Cassibelauvius, of Shields -	Barque -	534	20	Liverpool to Calcutta -	Salt -	W.S.W.	10	Dark, and hazy.	4 A.M. -

WEXFORD TO WATERFORD.

Date of Casualty. 1.	Name of Vessel. — Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. — Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.
(143) Dec. 17	Johanna Kirwan, of Dungawan.	Schooner	67	5	Cardiff to Waterford -	Coals -	W.	4	Clear -	12 30 P.M. -
(33) Jan. 23	Alciope. of Liverpool -	Brig -	199	10	Liverpool to Malabar -	General -	S.S.W.	7	Hazy -	3 P.M. -

rk inclusive, and on the Coasts of Islay and Kintyre, during the Years 1856 and 1857—*continued.*

's Age ıd lassed l's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. — Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
.	14.	15.	16.	17.	18.	19.	20.	21.	22.
ns -	Total - £3,000.	Nova Scotia -	Total -	Unknown	2	11, by "Sarah," trawler	Wrecked	on Blackwater Bank, Arklow, and broke up entirely; heavy gale, thick weather, and inattention to the lead, which was not hove after leaving port.	Wr. 460 Dep. 477 " 488
ns -	£9,000 -	Unknown -	Unknown	Unknown	3	18 by luggers - -	Wrecked	on Blackwater Bank and drifted to Cahore Point, where she became a wreck; no allowance made by master for the state of the tide.	Wr. 2236
-	Unknown £5,000.	Unknown -	Unknown	Unknown	None -	- - - -	Stranded	on Blackwater Bank. Ship struck in a fog and rolling heavily; expected masts to go over the side. Master and crew left her, and got ashore at Wexford.	Wr. 1055 " 1073
- -	Unknown	Unknown -	Nil -	Unknown	None -	- - - -	Stranded	on Blackwater Bank, Wexford. Lucifer Shoal broken water seen ahead. Ship missed stays; and in act of wearing ran on the shoal, and remained 1½ hour; when she beat over, and made water freely. Ran for Holyhead for repairs. Lead not hove.	Wr. 1289 " 1360
- -	£800 -	Unknown -	£100 -	Unknown	None -	All, by coast guard boat.	Wrecked	in Ballyhine Bay, county of Wexford; filled, and went to pieces an hour after she struck. Total loss.	Wr. 377 " 694 Dep. 389

WEXFORD.

's Age ıd lassed l's List.	Vessel: Estimated Loss on.	Vessel: Insured for, and where.	Cargo: Estimated Loss on.	Cargo: Insured for, and where.	Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty.	Site and Cause of Casualty. — Remarks.	Authority.
- ss.	£400 -	£600 - - Dublin.	£1,200 -	Not -	None -	- - - -	Wrecked	at Wexford; struck the bar on entering, not sufficient water; became leaky, filled and sunk. Total loss.	Wr. 677 " 762
- -	£50 -	Not - -	£40 -	Not -	None -	- - - -	Stranded	1 mile of entrance to Wexford Harbour; lost sails by the gale; ran for the shore, and is expected to be got off.	Wr. 1989 " 1924
- -	£20 -	Unknown -	£50 -	Unknown	None -	- - - -	Stranded	at Wexford under Whitehouse; parted anchors; got off.	Wr. 2123 " 2146
n -	Unknown	Unknown -	Unknown	Unknown	6	2, by coast guard -	Wrecked	on N. end of Chisel Village, Wexford; let go anchors with only 30 fathoms cable. Crew too much disabled to make sail, or she might have been saved.	Wr. 271 " 277
n -	- -	- - -	- -	- -	2	3, by boat from shore	Stranded	near Wexford. The boom came over and put 2 men overboard. Wind and sea increasing, chain parted; got up forestay sail, and ran her ashore.	Wr. 2300
- -	£2,300 -	Unknown -	£190 -	Unknown	None -	- - - -	Wrecked	on the base rocks off Greenore Point, Wexford; running for port of safety with 2 feet water in hold, ship did not steer; struck a rock, and in five minutes filled and sunk; crew saved in long boat.	Wr. 3718

WEXFORD TO TUSKAR.

's Age ıd lassed l's List.	Vessel: Estimated Loss on.	Vessel: Insured for, and where.	Cargo: Estimated Loss on.	Cargo: Insured for, and where.	Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty.	Site and Cause of Casualty. — Remarks.	Authority.
- - 5 years.	£1,000	Sebastia - -	£12,000 -	Unknown	None -	All, by our own boat -	Wrecked	on the Splank Rock, off Wexford Coast, through thick state of weather, and mistaking lights, and variable winds.	Dep. 99 Wr. 406
- -	£250 -	Not - -	£150 -	Not -	1	- - - -	Stranded	on the Raven, 2 miles north of Wexford, by stress of weather, having no means of saving the lives of the passengers A woman washed overboard after vessel struck.	Wr. 1924 " 2010 " 1883
- -	£10,000 -	£12,000. Briston and New York.	£200 -	Unknown	None -	- -	Wrecked	on Greenore Point, stranded in Dunney Point; got off; weather being thick, mistook the S. Bishops for the Tuskar light; did not heave the lead.	Wr. 728
- - s A 1..	Unknown	London -	Unknown	Unknown	None -	- - - -	Struck	on a sunken rock, 2 miles N.E. by E. from Tuskar, and sprung a leak, which obliged her to run for Milford to discharge and repair.	Wr. 2557
- -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Distressed	between Tuskar and Smalls. Struck by heavy seas which washed over all, from being much overladen; put into Cork to discharge cargo.	Wr. 978
- -	Unknown	Topsham and London.	Unknown	Unknown	None -	- - - -	Leaky	off Tuskar. Blowing furiously; struck by several heavy seas which strained her very badly. Put into Waterford for survey and repair.	Wr. 2296
-	Unknown £3,500.	Leith - -	Total - £300.	Unknown	Nil -	- - - -	Wrecked	on South Rock, 1 mile from Tuskar Rock; rock not marked on the chart which was on board; sunk 10 minutes after striking.	Wr. 1715 " 2022
- -	Unknown	Unknown -	Unknown	Unknown	2	- - - -	Dismasted	between Tuskar and Beadsey; topmast, sails, and rigging all carried away, and two hands killed.	Wr. 2618

WEXFORD TO WATERFORD.

's Age ıd lassed l's List.	Vessel: Estimated Loss on.	Vessel: Insured for, and where.	Cargo: Estimated Loss on.	Cargo: Insured for, and where.	Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty.	Site and Cause of Casualty. — Remarks.	Authority.
- -	Unknown	Not - -	20 per cent.	Not -	None -	- - - -	Stranded	on the Brecaum Bridge, near Slade, Wexford; came too near shore to secure the steep of the tide, to weather the Hook Light, and make Waterford Harbour.	Wr. 280
- ss A 1.	- - -	- - -	- -	- -	None -	All - - -	Stranded	on Barrel Rocks, ¾ mile E. of Ballagan Point, during a gale; got off and towed into Carlingford Bay, with 6 feet water in hold; bottom and keel much damaged; want of a pilot.	Wr. 269 " 277

Vessels in Distress (otherwise than by Collision) on the N., N.E., E., and S.E. Coasts of Ireland,

Date of Casualty. 1.	Name of Vessel. — Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. — Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.
1856. (59) Feb. 22	Catherine, of Brevig	Barque	270	12	Queenstown to Cardiff	Ballast	N.N.E.	7	Thick	9 P.M.
1857. (228) Dec. 3	Purtendiada, of Spain	Schooner	155	10	Alfandigo to Liverpool	Fruit	S.W.	9	Thick	8 30 A.M.
(163) Mar. 14	Elizabeth Huddleston, of Waterford.	Schooner	75	5	Newport to Waterford	Coals	S.S.W.	12	Cloudy	12
(180) April 18	Diamond, of London	Schooner	94	6	Cardiff to Waterford	Coals	S.S.W.	9	Fog	4 15 A.M.
1856. (124) Dec. 5	J. L. Warner, of New Orleans	Ship	895	19	New Orleans to Liverpool	Cotton	S.	10	Very thick	6 A.M.
(129) " 9	Blonde, of Belfast	Brig	241	10	Tarangog to Falmouth	Linseed	W.S.W.	11	Bad	5 15 P.M.

WATERFORD.

Date of Casualty. 1.	Name of Vessel. — Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. — Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.
(86) July 19	Express, of Weymouth	Ketch	75	5	Glasgow to Rouen	Iron	S.W.	11	Thick	-
(94) Sept. 20	Pallas, of Jersey	Brig	164	10	Waterford to Newport	Fish	N.N.W.	4	Cloudy	9 A.M.
(142) Dec. 17	Eliza, of Cardigan	Brig	79	6	Llanelly to Milford	Coals	S.W. by W.	5	Rain and thick.	9 P.M.
(145) " 27	Avoca, of Dublin	Barque	2[illegible]3	12	New York to Bristol	Wheat	N.W.	11	Thick and gloomy.	-
1857. (221) Nov. 28	Lord Seaton, of Sunderland	Barque	416	11	Troon to Malaga	Coals	S.E.	6	Clear	-
1856. (23) Jan. 14	Undine, of Wexford	Brig	105	7	Glasgow to Marseilles	Pig iron	E.N.E.	9	Clear	2 P.M.
(126) Dec. 5	Alchymist, of Middlesbro'	Brig	275	10	Alexandria to Cork	Wheat	S.W.	10	Thick	-
(131) " 9	Progress, of Glasgow	S.S.	317	19	London to Lisbon	Grain	S.W.	11	Squally; thick.	-
1857. (222) Dec. 2	Nero, of P. E. Island	Brigantine	119	7	Bedique to Cardiff	Timber	S.W. and S.S.W.	10	Thick	-
1856. (79) April 5	Lucy Ring, of United States of America.	Barque	386	11	Monte Video to Liverpool	Hides, Tallow, and Wool.	S.E.	Mod.	1½ year	-
(107) Oct. 5	Dora, of Youghal	Smack	24	3	Dungarvon to Waterford	Wheat	N.W.	4	Hazy	9 A.M.
(129) Dec. 6	Adriatic, of New York	Ship	1,327	29	Liverpool to New York	General	S.W.	10	Thick	-
(132) " 9	Sea Bird, of Halifax	Brig	107	7	Wallace, N.S. to Liverpool	Timber	S.S.W.	10	Thick, with rain.	2 30 P.M.

WATERFORD TO CORK.

Date of Casualty. 1.	Name of Vessel. — Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. — Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.
1857. (148) Jan. 9	James Buchanan, of New Orleans.	Ship	1,255	30	Liverpool to New Orleans	Salt	S.S.W.	5	Thick fog	2 A.M.
1856. (123) Dec. 5	Margaret, of Cardigan	Schooner	73	5	Llanelly to Youghal	Culm	S.S.E.	0 night.	Thick	7 30 A.M.
(138) " 9	François Xavier, of Havre	Brig	78	8	Havre to Lisbon	General	S.	10	Hazy	3 30 P.M.
(125) " 6	Importa, of Liverpool	Ship	734	22	Newport to Jamaica	Coals	S.W.	11	-	8 30
(137) " 9	Ellen, of Cardigan	Schooner	96	6	Gloucester to Kilrush	Salt	S.S.W.	10	Hazy	11 A.M.

k inclusive, and on the Coasts of Islay and Kintyre, during the Years 1856 and 1857—*continued.*

Age ssed List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.				Remarks.	
	14.	15.	16.	17.	18.	19.	20.	21.	22.
	£3,000	£3,000	-	-	None	-	Wrecked	on the Barrel Rock, near the Smalls, and broke up; steered proper course, but current setting so strongly upon the rocks, and the weather very thick, could not discern the danger they were in. Total loss.	Dep. & Wr. 695 „ 808
	Unknown	Unknown	Unknown	Unknown	None	-	Stranded	at Kilmore. Anchored in Bay of Ballyteigue, dragged anchors, and drifted; made sail and ran for Kilmore to save life and property; cargo discharged.	Wr. 2498 „ 2591
	£250	Unknown	None	Unknown	None	-	Stranded	E. of Kilmore Pier. Blowing a hurricane; broke away from her moorings and drove ashore, where she is likely to become a total loss.	Wr. 845
	£700	Unknown	£135	Unknown	None	6, in iron boat	Wrecked	on Ballygranyon, Kilmore. having struck on the Mudium Reef. Irregularity and strength of tides, and thick weather.	Wr. 1300
wn.	Unknown	Unknown	Unknown	Unknown	Nil	14, by ship's boat, coast guard men, 5 by rocket apparatus.	Wrecked	near the Bar Tacamshane; ship drove ashore after riding 60 hours with masts cut away, and anchors ahead. Total loss.	Wr. 2630 „ 2639 Wexford.
	£2,500	West of England £2,500.	£4,000	-	None	-	Wrecked	off Fethard's Land, county Wexford, in a lee shore; stress of weather.	Wr. 2769 „ 2790 „ 2816

WATERFORD.

	14.	15.	16.	17.	18.	19.	20.	21.	22.
	£70	No	Nil	Unknown	None	-	Leaky	off Waterford, through stress of weather and heavy sea; had to discharge.	Dep. 1635
s.	Unknown	Lloyd's	Unknown	Unknown	None	-	Stranded	abreast of glasshouse in River Suir, Waterford; bad management of pilot not putting vessel about in time.	Wr. 1959
	£500	£400 Lloyd's.	£10	Unknown	None	-	Wrecked	on the strand at Tramore, Waterford; thick weather and strong current.	Wr. 2772 „ 2759
years.	Unknown	Yes Unknown.	10 per cent.	Yes Unknown.	None	-	Distressed	Leaky; and decks swept by continuous bad weather; when off Waterford rudder broke away; lost all command, but succeeded in getting up to passage, greatly damaged.	Wr. 2809
	-	Yes	Unknown	Unknown	None	-	Leaky	15 miles off Waterford. Leaky from straining, so badly that crew refused to proceed. Put into Waterford for repairs.	Wr. 2491
	£200	Nil	£135	Unknown	None	All	Leaky	and in distress, having met heavy gales at sea and Cape Clear; threw quantities of cargo overboard, and put into Waterford to repair; stress of weather.	Wr. & Dep. „
	Can't say	£2,400 Hartlepool and Stockton.	Unknown	Unknown	None	-	Leaky	off E. coast of Ireland, through heavy gales and bad weather; put into Waterford to discharge and repair.	Wr. 2676
	Unknown	Glasgow	40 per cent.	Lloyd's	1	-	Dismasted	leaky, and greatly damaged, off Old Head of Kinsale: blowing a hurricane, which swept decks, and did great damage; put into Waterford to discharge and repair.	Wr. 2685
wn.	Unknown	Bediques	Unknown	Unknown	None	-	Leaky	off Cape Clear, by stress of weather; pumps choked; in danger of sinking. Put into Waterford to discharge and repair.	Wr. 251
	£7,000	Unknown	£33,000	London	None	-	Burned	When off Mine Head cargo discovered to be on fire; left the ship, and returned again on the flame abating; battened down hatches and ran her for Waterford, where she was scuttled and recovered.	Dep. & Wr. 1294 „ 1360 „ 1362
	£60	Not	Can't say	Nil	Nil	-	Stranded	on the Black Strand of Dungarvon	Wr. 2255
	Unknown	New York	£200	Not	9	-	Stranded	on Black Rock, Dungarvon. Had 10 ft. water in the hold when she struck; cargo may be saved; ship doubtful.	Wr. 2686
	£300	Unknown New York.	£100	Unknown	None	-	Stranded	near the Old Abbey, Dungarvon; lying at anchor, driven ashore by the gale, and sustained much damage; cargo discharged; vessel still remains.	Wr. 2684 „ 2705

WATERFORD TO CORK.

	14.	15.	16.	17.	18.	19.	20.	21.	22.
	£13,000	Unknown	Total	Unknown	None	-	Wrecked	off Ballymacart Head, 3 miles, of Minehead; weather very foggy; thought they were further from land; lead not hove; total loss.	Wr. 343 „ 628
n	£700	Unknown	£30	Unknown	None	-	Wrecked	off Cobally, about 3′ to the westward of Ballymacart Head. Thick weather; light and variable winds, by which the vessel drifted; supposed her to be 16′ off the land; no lead hove. Total loss.	Wr. 2593
n	Unknown	Unknown	Unknown	Unknown	2	-	Stranded	on Guryn's Sand, near Youghal; could not clear the land from the bad state of the weather.	Wr. 276
n	£3,500	Unknown	£1,000	Unknown	None	-	Wrecked	on Ballycotton Strand, by stress of weather.	Wr. 2659
	£800	Unknown	Unknown	Unknown	None	6, by rockets and boat	Wrecked	in Ballycotton Bay; anchors came home in gale of wind; obliged to slip to save ship and lives.	Wr. 2761

Vessels in Distress (otherwise than by Collision) on the N., N.E., E., and S.E. Coasts of Ireland, from

CORK.

Date of Casualty. 1.	Name of Vessel. — Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. — Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.
1856. (56) Feb. 17	Undine, of New York	Barque	253	10	Liverpool to Smyrna	Coals	S.E.	6	-	-
(133) Dec. 9	Elizabeth, of Bergen	Brigantine	100	8	Galatz to Cork	Corn	S.S.W.	11	Gales	11 A.M.
(134) „ 9	Emerald, of Scarborough	Brigantine	336	12	Alexandria to Cork	Wheat	S.	10	Thick and hazy.	11 A.M.
1857. (186) June 30	Whip, of Youghal	Hooker	21	3	Youghal to Cork	Casks	N.N.E.	Moderate.	Fine	4 A.M.
1856. (24) Jan. 16	St. Domingo, of Oporto	Brig	246	12	Trieste to Cork	Grain	S.S.W.	7	Cloudy	-
1857. (197) Aug. 18	Maryflower, of Brixham	Schooner	98	6	Liverpool to Avereiro	Coals	N.	6	-	-
1856. (4) Jan. 5	William Thomas, of Newfoundland.	Barque	239	14	Newfoundland to Pernambuco.	Fish	N.	12	Clear	Nil
(5) „ 5	Tricolor, of Liverpool	Ship	1,238	32	Liverpool to Calcutta	Salt	S.S.W.	11	Thick	-
(6) „ 6	Gem, of Christiana	Brig	206	10	Alexandria to Liverpool	Grain	S.S.E.	10	Thick	-
(8) „ 6	Rialto, of Yarmouth, U.S.	Ship	1,100	36	New York to Cork	Grain	W.	12	-	-
(9) „ 6	War Hawk, of Liverpool	Barque	209	12	Pernambuco to Cork	Sugar	W.	11	Gales	-
(10) „ 7	Edward Everett, of Baltimore.	Ship	622	21	Baltimore to Cork	Flour	W.S.W. to W.N.W.	11	Thick	Nil

SEA.

Date of Casualty. 1.	Name of Vessel. — Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. — Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.
(11) Jan. 8	Luconia, of New York	Ship	481	15	Liverpool to Charleston	Salt	E.S.E.	10	Cloudy	¾ flood
(12) „ 8	Eugene, of Prince Edward's Island.	Brigantine	120	9	Prince Edward's Island to London.	Timber	N.W.	11	Thick	-
(13) „ 8	Ayrshire Lass, of Ardrossan	Brig	157	8	Alexandria to Cork	Wheat	S.W. to N.W.	12	Thick	-
(14) „ 9	Choice, of Newcastle	Brig	254	9	Alexandria to Hamburgh	Grain	E.	10	Hazy	-
(19) „ 12	Bideford, of Dartmouth	Brig	141	7	Syra to Queenstown	Grain	N.E.	11	Cloudy	10 A.M.
(20) „ 13	Duke of Bronte, of Halway	Barque	423	14	Molmon to Aberdeen	Timber	W.	9	Thick	-
(21) „ 14	Dromahair, of Sligo	Brig	376	12	Swansea to Malta	Coals	W.	8	Squally	-
(25) „ 16	Josephine, of Bath, U.S.	Ship	456	13	Liverpool to Philadelphia	Salt	S.S.W.	11	Squally	-
(26) „ 17	Windsor Castle, of Liverpool	Ship	782	25	Liverpool to Suez	Coals	W.S.W.	10	Squally	-
(27) „ 19	British Empire, of London	Ship	3,011	52	Chincha Island to London	Guano	S.W.	12	-	-
(29) „ 20	Johanna Henrietta, of Amsterdam.	Brigatine	200	7	Portacuballa, for orders	Dyewood	W.	10	Thick	-

ɛ inclusive, and on the Coasts of Islay and Kintyre, during the Years 1856 and 1857—*continued.*

Age l ased s List.	Vessel. Estimated Loss on. 14.	Vessel. Insured for, and where. 15.	Cargo. Estimated Loss on. 16.	Cargo. Insured for, and where. 17.	Lives lost. 18.	Number of Lives saved, and by what Means. 19.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage. 20.	Site and Cause of Casualty. — Remarks. 21.	Authority. 22.
				CORK.					
-	Unknown	Not	None	Unknown	None	-	Leaky	off Bardsey Island, through stress of weather and imperfect repairs; put into Queenstown to discharge and refit.	Wr. 640
-	Unknown	Norway	Unknown	-	None	-	Stranded	on East Beach, Queenstown; drove in the gale with two anchors ahead, and to avoid collision with a barque run on the beach; strained so much that cargo must be discharged.	Wr. 2653 „ 2661
-	£2,200	Scarborough £2,200.	Unknown	Unknown	None	12, by rocket line	Wrecked	on Roches Bay, Queenstown; sudden gale made it impossible to make sail on the vessel, and driving her into the bay, where she became a wreck.	Wr. 2675 „ 2812
ars	Unknown	Not	Unknown	Not	None	-	Wrecked	in Roches Bay, Queenstown. Leaky; ran her ashore to safe life; broke up at once, being very old and rotten.	Wr. 1541
-	Unknown	Unknown	Unknown	Unknown	None	All	Stranded	at Whitepoint, Queenstown, being run ashore in a sinking state, having sprung a leak in heavy bad weather.	Wr. 172 „ 150
-	-	-	-	-	-	-	Leaky	off Cork	Wr. 1758
sed	£6,000	Liverpool	£3,000	Unknown	None	All	Leaky	Seriously damaged in hull and cargo, while lying to in a hurricane in lat. 42° 18′ N., long. 46° 41′ W. Put into Cork for casual repairs, and thence to Liverpool for proper repairs.	Wr. 292 „ 339
-	Unknown	Unknown	Unknown	Unknown	None	-	Leaky	Sprung a leak in lat. 53½°, long. 10°; by stress of weather. Cargo having shifted, and pumps become choked; bore up for Cork for repair.	Wr. 184, 222
2 B.	-	Norway	Unknown	Unknown	None	All	Leaky	Stress of weather; vessel much strained, one pump broken, and the other choked; put into Queenstown to discharge cargo.	Wr. 184
-	Unknown	Unknown	£1,200	-	None	-	Leaky	Main stem started forward; ship much strained and opened, and pumps choked in lat. 39° 30′, long 41° 20′. 600 barrels flour thrown overboard; stress of weather; put into Cork.	Wr. 290
	-	-	-	-	None	-	Dismasted	strained, leaky, and lost sails in a gale in Irish Channel; put into Queenstown to discharge and repair.	Wr. 314 „ 417
-	Unknown	United States	£1,200	Unknown	None	All	Dismasted	in lat. 40° 42′ N., long. 50° 20′ W., struck by heavy sea, hull spars, sails, and cargo much damaged; put into Cork for repairs.	Wr. 292
				SEA.					
-	Unknown	Unknown	Unknown	Unknown	None	All	Leaky	90 miles S.W. of Cork; had 3 feet water in hold, and making 18 miles per hour; put into Cork for repair; stress of weather.	Wr. 119, 172
-	Unknown	Yes	None	Not	None	All remained on board	Leaky	Struck by heavy seas in lat. 43° 5′ N., long. 46° 20′ W., and sustained very great damage; bore up for Queenstown to repair.	Wr. 245
r.	£800	Unknown	-	Unknown	1	7, in the ship	Dismasted	and greatly damaged in sails, rigging hull, and cargo, having been thrown on her beam ends in a hurricane in lat. 37° N., long. 8′ 30″ W.; put into Cork to refit.	Wr. 453
years.	Unknown	Unknown	Unknown	Unknown	None	All	Leaky	Struck by heavy seas 20 miles S.E. of Scilly; leak increasing; men exhausted. bore up for Cork and discharged cargo to repair.	Wr. 194
-	Unknown	Unknown	Unknown	Unknown	None	All	Dismasted	in distress, and leaky; struck by heavy sea in lat. 44° 30′ N., long. 11° W.; put into Queenstown to discharge part cargo and repair damages.	Wr. 273
-	Unknown	Lloyd's	£140	Unknown	None	-	Dismasted	decks swept, and two boats carried away by heavy sea in lat. 40° 49′ N., long. 18° 18′ W.; bore up for Queenstown to refit.	Wr. 216 Dep. 636
1855.	Unknown	Unknown	Unknown	Unknown	None	All	Leaky	Stress of weather caused the leak; put into Queenstown to discharge.	Wr. 185
t New	Unknown	New York	Unknown	Philadelphia.	1	-	Leaky	lost top of mainmast and several sails in a hurricane in lat. 42° N., long. 34° 40′ W.; pumps choked; bore up for Cork to discharge and repair.	Wr. 189 „ 209
loyd's.	Unknown	Lloyd's	Unknown	Yes	None	All	Leaky	stress of weather; leaky; pumps choked with fine coals; bore up for Cork to discharge; said to be overloaded; had 1,100 tons of coal on board.	Wr. 185 „ 216
-	Unknown	London and Liverpool.	-	-	None	-	Leaky	and severely strained while lying to at sea; loss of sails and boat; bore up for Queenstown to repair.	Wr. 208
-	Unknown	Amsterdam	Unknown	Unknown	3	-	Leaky	and in distress in lat. 39° 44′ N., long. 31° W.; running before the wind; struck by heavy sea, lost three men overboard, and sustained heavy damage; put into Queenstown for repairs.	Wr. 432

Vessels in Distress (otherwise than by Collision) on the N., N.E., E., and S.E. Coasts of Ireland, from

Date of Casualty. 1.	Name of Vessel. — Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. — Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.
1856. (34) Jan. 25	Will Dargan, of Quebec	Brigantine	136	9	Quebec to Kingstown	Timber	S.W.	11	Stormy	-
(35) Feb. 1	Orion, of New York	Ship	844	18	Newcastle to Bermuda	Coals	-	-	-	-
(39) „ 6	Eliza Stewart, of Greenock	Ship	624	21	Newport to Calcutta	Coals and Iron.	S.W.	9	Gales	-
(49) „ 8	Monterez, of Savanna	Ship	600	17	Baltimore to Cork	Flour	S.S.E.	10	Thick	-
(55) „ 17	Rosalie, of Londonderry	Brig	228	10	Newport to Alexandria	Iron	S.S.E.	7	Hazy	-
(58) „ 18	Io, of Sunderland	Brig	307	10	Athens to Galway	Corn	S.W.	10	Fine	-
(60) „ 26	Catherine Pemberton, of London.	Barque	319	14	New York to Rotterdam	Rice	S.	11	Rainy	-
(61) Mar. 7	Walton, of Liverpool	Barque	262	13	Liverpool to Para	Coals	E.	5	Thick	-
(62) „ 7	Edgar, of London	Brig	233	4	Alexandria to Trieste	Grain	S.W. by S.	6	Clear	-
(63) „ 12	Passenger, of Sunderland	Barque	277	10	Alexandria to Havre	Wheat	E.N.E.	9	Cloudy	-
(64) „ 13	La Grange, of Gardiner, U.S.	Brigantine	320	10	Cuba to London	Molasses	E.	9	Hazy	-
(66) „ 14	Syria, of London	Ship	502	18	New York to Cork	Grain	E.S.E.	10	Gale	-
(67) „ 15	Waverley, of London	Barque	436	17	Sierra Leone to London	Timber	S.S.W.	12	Hurricane	-
(68) „ 16	Abbot, of Arbroath	Barque	245	12	Buenos Ayres to Queenstown.	Bone ash	S. by E.	9	Squally	-
(69) „ 24	Helen Hardy, of Shields	Barque	289	10	Glasgow to Palermo	Coals	S.S.E.	9	Gales	-
(71) „ 29	Antilles, of London	Barque	195	9	Liverpool to Newcastle	Salt	S.E.	7	Hazy	-
(72) „ 29	Sesostris, of Skein	Ship	600	18	Cardiff to Barcelona	Coals	E.	6	Breeze	-
(73) April 3	Ellen, of Maryport	Brig	190	9	Liverpool to Havre	General	W.N.W.	9	Gales	3 P.M.
(141) Dec. 16	Effingham, of Cork	Ship	771	21	Bombay to Amsterdam	General	S.S.E. to S.S.W.	10	Variable	-
1857. (149) Jan. 16	Glenlyon, of New Ross	Ship	908	26	Liverpool to Syra	Coals	N.W.	10	Foul and hazy.	2 A.M.
(150) „ 23	Eliza and Caroline, of South Shields.	Brig	281	11	Shields to Venice	Coals	W.S.W.	10	Squally	-
(154) Feb. 24	Jane Glassin, of Leith	Barque	758	21	Liverpool to Corfu	Coals	S.	10	Heavy	-
(156) „ 27	Boanerges, of London	Ship	1,236	52	Liverpool to Sydney	Cargo, and 412 passengers.	S.W.	10	Strong breeze.	-
(164) Mar. 14	Atlantic, of Sweden	Ship	617	19	Cardiff to San Francisco	Coals	S.W.	11	Squally	11 P.M.
(165) „ 14	Thomas, of Liverpool	Barque	858	22	Cardiff to Malta	Coals	W.S.W.	10	Dark and rainy.	2 A.M.

rk inclusive, and on the Coasts of Islay and Kintyre, during the Years 1856 and 1857—*continued.*

l's Age nd classed d's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. — Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
3.	14.	15.	16.	17.	18.	19.	20.	21.	22.
s -	Unknown	Quebec -	Nil -	Quebec -	None -	All, in ship - -	Leaky	and foremast sprung off St. Lawrence; stress of weather; deficient crew and bad compasses; put into Queenstown to discharge.	Wr. 243
-	- -	- -	- -	- -	- -	- - - -	Leaky	sprung a leak in lat. 49° N., long 15° W., during heavy gale of wind; put into Cork to discharge and repair.	Wr. 713
-	Unknown	Unknown -	Unknown	Yes -	None -	- - - -	Leaky	and in distress, in lat. 49° N., long. 9° 30′ W.; bore up for Cork to discharge and repair.	Wr. 430 Dep. 66
vn -	Unknown	Baltimore -	Unknown	Baltimore	None -	- - - -	Leaky	and much damaged, in lat. 51° 31′ N., long. 13° 47′ W. before the wind; struck by heavy sea; vessel sprung leak; cargo damaged; man's leg broken; put into Cork to refit.	Wr. 452 „ 655
-	Unknown	Lloyd's -	Unknown	Unknown	None -	- - - -	Stranded	on bar at Queenstown, when running in to repair damages and stop leak received in a gale at sea; keel injured and cargo discharged.	Wr, 2,'678 „ 1, 7
- -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Disabled	in crew; in consequence of the heated state of the cargo obliged to put into Queenstown to discharge.	Wr. 747
- - Lloyd's.	Unknown	Lloyd's - -	Unknown	Unknown	1	- - - -	Leaky	Loss of bulwarks and much damaged by heavy gales in lat. 50° N., long. 20° W.; put into Queenstown to discharge and repair.	Wr. 945
-	Unknown	Lloyd's - -	Nil -	Unknown	None -	- - - -	Leaky	Sprung a leak 60 miles N.W. of Scilly; put back to Cork to discharge and repair.	Wr. 862
- -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Distressed	and leaky; struck by heavy seas about 100 miles from land, which carried away bulwarks and stove her boats; put into Cork to discharge part cargo and repair.	Wr. 864
- - loyd's.	Unknown	Lloyd's - -	Unknown	Unknown	None -	- - - -	Leaky	Sprung leak in lat. 49° 20′ N., long. 6° 30′ W., through stress of weather. Cabin stove, and carried away, much damaged; put into Queenstown to discharge and repair.	Wr. 884
hs -	£500 -	Unknown -	None -	Unknown	None -	- - - -	Leaky	60 miles of Scilly; strained, sprung mainmast, &c., in cross sea, and heavy gales; put into Cork to discharge and repair.	Dep. 911
-	Unknown	Unknown -	Unknown	London -	None -	- - - -	Leaky	Bulwarks damaged by continuance of bad weather on homeward passage; put into Cork,	Wr. 1006
-	Unknown	Unknown -	None -	Unknown	None -	- - - -	Leaky	Severely damaged by hurricane in lat. 53° 15′ N., long. 10° 0′ W., which carried away yards, bulwarks, cabin, &c.; put into Cork to discharge and repair.	Wr. 1004
-	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Leaky	by stress of weather at sea; put into Queenstown to discharge and repair.	Wr. 931
-	Unknown	Shields -	Unknown	Glasgow -	None -	- - - -	Leaky	Sprung a leak 7 miles off the Tuskar light, by stress of weather; put into Queenstown to refit, discharge, and repair.	Wr. 944
-	Unknown	Yes - -	Unknown	Unknown	None -	- - - -	Leaky	in lat. 51° 20′ N. and long. 16° 0′ W.; stress of weather; very heavily strained and making much water; put into Queenstown to discharge and repair.	Wr. 984
-	Unknown	Norway -	Unknown	Unknown	None -	- - - -	Leaky	Trevose light bearing S.S.E. 10 miles; put into Queenstown to discharge and repair.	Wr. 987
- -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Leaky	Sprung a leak in lat. 51° N., long. 16° 31′ W., owing to the heavy labouring of the vessel. Put into Queenstown to discharge and repair.	Wr. 1041
- lass.	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Damaged	by severe weather near Cape Clear; ship strained; cargo damaged and pumps choked; put into Cork for repair.	Wr. 2796
- -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Leaky	and seriously damaged; 60 miles from Cape Clear, having been struck by heavy seas, which shivered cutwater, and caused her to make so much water as to make it unsafe to proceed; put into Cork.	Wr. 480
- - s.	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Leaky	and dismasted by stress of weather at sea; bore up for Cork to discharge and repair.	Wr. 560
vn -	Unknown	Lloyd's -	Unknown	Unknown	None -	- - - -	Leaky	30 miles from Cork; heavily strained by stress of weather; put into Cork to discharge and repair.	Wr. 754
- -	Unknown	London - -	Unknown	Unknown	None -	- - - -	Dismasted	100 miles from Cork; blowing strong gale; ship rolled violently; topmasts went over the side; mainmast head split; put into Cork for repair; cargo of iron, stowed in bulk.	Wr. 786
- -	£500 -	Unknown -	Nil -	Unknown	None -	- - - -	Dismasted	56 miles N.N.E. of Old Head of Kinsale, in a heavy squall; masts went overboard, and quantity of rigging. Bore up for Bristol for repairs.	Wr. 862
- - ep.	Unknown	Yes - -	Not -	Unknown	None -	- - - -	Dismasted	40 miles from Cork. Blowing very hard; topmast, main and mizen masts all carried away. Got into Holyhead, and from thence to Liverpool.	Carrickfergus Wr. 900

Vessels in Distress (otherwise than by Collision) on the N., N.E., E., and S.E. Coasts of Ireland, from

Date of Casualty.	Name of Vessel. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind. Direction.	Wind. Force.	Weather.	Hour and Time of Tide.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
(169) Mar. 17	Argus, No. 2, of France	Schooner	74	6	Liverpool to Goree	General	S.E.	9	Stormy	-
(174) „ 21	Calpe, of Yarmouth	Schooner	92	6	Liverpool to Bayonne	Corn	S.E.	10	-	-
(183) May 18	Lincoln, of Boston	Barque	306	11	Antwerp to Boston	General	S.E.	11	Bad	-
(184) June 2	Teresa, of Bilboa	Brig	235	13	Glasgow to Bilboa	General	S.W.	10	-	-
(185) „ 13	Hannah, of Yarmouth	Brig	111	6	Glasgow to Havre de Grace	Iron	S.E.	10	Gale	11 15 P.M.
(187) July 7	Bolina, of Liverpool	Barque	403	18	Liverpool to Valparaiso	General	S.E.	8	Heavy	-
(188) „ 13	Enrichetta, of Genoa	Brig	159	10	Liverpool to Genoa	General	N.W.	10	Thick	-
(194) Aug. 15	Boreas, of Flensberg	Brig	243	13	Liverpool to St. John s	General	N.W.	6	Cloudy	-
(199) „ 29	Wilhelmina, of London	Barque	366	14	Cardiff to Simone's Bay	Coals	N.E.	6	Clear	-
(200) „ 31	Roebuck, of Boston	Ship	889	21	Swansea to Caldera	Coals	W.	6	Clear	-
(203) Sept. 17	Australia, of Wiscasset	Brig	122	7	Newport to Cardenas	Coals	S.E.	6	Thick	-
(204) „ 19	G. W. Hall, of Providence	Barque	355	11	Newport to N. Carolina	Iron	S.W.	8	Heavy	-
(215) Oct. 27	Albert Edward, of Liverpool	Ship	497	23	Liverpool to Mauritius	Coals	S.E.	8	Thick	-
(224) Dec. 3	Jessie, of St. John's	Brig	142	10	Liverpool to St. John's	General	N.N.E.	11	-	-
(153) Feb. 20	Margaret Alice, of Milford	Smack	26	3	New Ross to Milford	Granite	S.W.	2	Fine	9 30 P.M.

rk inclusive, and on the Coasts of Islay and Kintyre, during the Years 1856 and 1857—*continued.*

's Age ıd lassed l's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. — Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
3.	14.	15.	16.	17.	18.	19.	20.	21.	22.
- -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Leaky	Sprung a leak between Liverpool and Cork, in consequence of heavy gales; threw over 700 barrels of gunpowder and 60 bags of rice to lighten her, and put into Cork to discharge and repair.	Wr. 1071
-	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Leaky	off Holyhead. Strong breeze springing up with a cross sea; sounded pumps, found much water, and cargo shifting; bore up for Cork, and discharged for repairs.	Wr. 979
rn -	Unknown	Boston - -	Unknown	Unknown	None -	- - - -	Leaky	off Scilly Islands. Bore up to examine, and found both masts sprung; and put into Cork to discharge and repair.	Wr. 1426
-	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Leaky	in the Channel, in a gale of wind and heavy sea. Kept pumps going until she reached Cork, where cargo discharged for repairs.	Wr. 1441
- -	Unknown	£800 - -	Unknown	Unknown	None -	- - - -	Dismasted	off St. Agnes Head, by stress of weather. Cut away the wreck. Ship leaked so much, put into Cork to discharge and repair.	Wr. 1481
- -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Leaky	in lat. 47° N., long. 9° W. Sprung a leak; pumps choked; crew refused to proceed. Put into Cork to discharge and repair.	Wr. 1585
-	Unknown	28,000 francs Genoa. -	Unknown	Unknown	None -	- - - -	Dismasted	off the Longships. Heavy weather; thrown on her beam ends; cargo shifted. Bore away for Cork to discharge and repair.	Wr. 1608
-	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Leaky	25 miles S. Dungarvon; ship rolling heavily, and shipping much water on deck; found heavy leak under the transom. Put into Cork to discharge and repair.	Wr. 1782
Foreign, l's.	Unknown	£2,000 -	Unknown	Unknown	None -	- - - -	Leaky	in lat. 48° 45′ N., long. 11° 7′ W., labouring and shipping heavy seas. Leak could not be kept under. Bore up for Cork to discharge and repair.	Wr. 1797
yd's -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Leaky	in long. 12° W., began two days after leaving Swansea, and ship rolling heavily; increased so much that crew refused to proceed. Put back to Cork to discharge and repair.	Wr. 1802
ıers -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Leaky	off Lundy Island. Strong gale springing up, sprung a leak, which increasing rapidly, put into Cork to discharge and repair.	Wr. 1874
ners -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Leaky	off Lundy Island. Mainmast and gear all injured by rolling in heavy cross sea; put into Cork to discharge and repair.	Wr. 1878
- -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Leaky	in the Channel. Finding more water than usual sounded. Leak increasing, bore up for Cork to discharge and repair.	Wr. 2340
- -	Unknown	Unknown -	Unknown	Unknown	None -	63 persons from the U.S.S. Northumberland.	Dismasted	and greatly damaged in a gale at sea. Vessel pooped, and every thing on deck swept away. In this alarming state a signal of distress was seen flying on another vessel. The Jessie bore down to her, and saved 63 persons under circumstances of great difficulty. Jessie put into Cork for repairs, &c.	Wr. 256
- -	£20	Unknown -	Unknown	Unknown	None -	- - - -	Leaky -	off Dunmore East Harbour; could not pump her out; run her ashore in a sinking state; cargo must be discharged.	Wr. 768

RETURN of VESSELS in DISTRESS (otherwise than by Collisi

	Date of Casualty.	Name of Vessel. —— Port of Registry (if known).	Rig.	Tons.	Men.	From. —— Bound to.	Cargo.	Wind. Direction.	Wind. Force.	Weather.	Hour and Time of Tide.	Master pass Examin
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	
						RAMSEY BAY.						
(4)	1856. Feb. 20	Harriett, of Londonderry	Schooner	76	5	Liverpool to Belfast	Corn	E.N.E.	9	Clear	4 A.M.	No
(13)	1857. March 15	George Jordan, of Liverpool	Schooner	91	4	Liverpool to Bowling	Salt	W.	9	Thick, with rain.	1 P.M.	None
(14)	„ 20	Douglas, of Ramsey	Schooner	82	5	Liverpool to Newcastle	Salt	S.E.	5	Very thick	5 A.M.	None
(9)	1856. Dec. 26	Alitus, Irvine	Brig	194	7	Dublin to Ardrossan	Ballast	N.E.	11	Thick	1 P.M.	Inter-
(10)	1857. Jan. 4	Factor, of Maryport	Schooner	125	6	Maryport to Belfast	Coals	E.	11	Clear	5 30 P.M.	C.S.
(7)	1856. Dec. 10	Enigma, of Liverpool	Schooner	84	5	London to Liverpool	General	S.W.	11	Thick	1 P.M.	No
(21)	1857. Sept. 30	Friends, of Ross	Brig	192	6	Whitehaven to Newport	Iron ore	S.E.	8	Thick	3 A.M.	C.S.
(12)	March 11	Samuel, of Liverpool	Schooner	83	4	Ardrossan to Runcorn	Iron	S.	6	Hazy	8 A.M.	None
(19)	May 1	Harriet Wyld, of Ramsey	Barque	202	8	Liverpool to Quebec	Salt	S.S.W.	5	-	-	Unkno
(3)	1856. Feb. 11	Enniskillen, of Londonderry	Schooner Steam ship.	401	27	Liverpool to Londonderry	General	S.S.E.	1	Dense fog	10 P.M.	No
						DOUGLAS BAY.						
(16)	1857. March 20	Nettle, of Liverpool	Smack	52	3	Runcorn to Douglas	Coals	S.S.E.	7	Hazy and thick.	8 30	None
(11)	„ 20	Eclipse, of Whitehaven	Schooner	106	6	Dublin to Whitehaven	Ballast	S.W	10	Rainy	High water	C.S.
(1)	1856. Jan. 2	Mary Annie, of Beaumaris	Schooner	53	4	Dublin to Whitehaven	Ballast	S.S.E.	9	Thick fog	9 - ½ ebb.	No
						DOUGLAS TO PORT MARY.						
(17)	1857. March 20	Countess of Derby, of Douglas	Smack	18	3	Whitehaven to Castletown	Coals	S.E.	5	Very foggy	2 A.M.	None
(6)	1856. Dec. 2	John Glaister, of Drogheda	Brigantine	68	4	Fleetwood to Drogheda	Coals	N.N.W.	8	Rainy	6 P.M.	None
(8)	„ 19	Brothers, of Killough	Schooner	59	4	Runcorn to Newry	Salt	W.S.W.	6	Stormy	High water	No
(15)	1857. March 20	Village Girl, of Douglas	Smack	16	3	Whitehaven to Castleton	Coals	S.E.	5	Very foggy	3 30 A.M.	None
(2)	1856. Feb. 16	Barbara, of Preston	Schooner	60	3	Douglas to Whitehaven	Ballast	-	4	Fine	4 A.M. ½ flood.	No

ASTS of the ISLE OF MAN, during the Years 1856 and 1857.

ge d ist.	Vessel.		Cargo.		Lives lost.	Number of Lives saved and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. — Remarks	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
	14.	15.	16.	17.	18.	19.	20.	21.	22.
							RAMSEY BAY.		
-	£200	Not	£200	Unknown	None	-	Stranded	at mouth of Ramsey Harbour, having sprung a leak in stress of weather and become waterlogged; was run ashore to save her.	Wr. 728
-	£75	£800 Lloyd's.	Nil	Unknown	None	-	Distressed	off Ramsey, Isle of Man, riding with two anchors down, drifted, carried away the windlass and bitts, and did considerable damage; assisted into Fleetwood to repair.	Wr. 943
-	£300	Not known	£35	Unknown	None	-	Wrecked	in Ramsey Bay; vessel came in with fresh S.E. breeze, very thick weather and a lee shore; lead hove only at ½ hour intervals; should have been kept constantly going. Total loss.	Wr. 980
d. -	£290	£500 Glasgow.	Nil	-	None	-	Stranded	at mouth of Ramsey Harbour; was at anchor in Ramsey Bay; windlass and bitts starting by stress of weather, compelled her to run anchor. Could not keep to sea; ran for harbour, and got ashore.	—
-	£200	£400 Liverpool.	Unknown	Unknown	None	-	Stranded	south side of Ramsey Harbour; came to anchorage in Ramsey Bay; not being able to hold, the cable was slipped and she ran for the harbour, and in attempting to take the entrance got ashore.	Wr. 141
-	£100	£1,000	£150	Unknown	None	-	Stranded	on Shellig, north of Ramsey Bay, Isle of Man; lost both her anchors, and stood to sea; could not hold it, and soon afterwards stranded, which saved her from becoming a total loss.	Wr. 2670
-	£1,200	£500 Dublin.	Unknown	Unknown	1	-	Foundered	in mid-channel off Ramsey, Isle of Man; heavy cross seas, and ship laboured so heavily that she started a butt, and went down.	Wr. 2444
-	£900	Unknown	£150	Not	None	-	Wrecked	on White Stone Bank, 5 miles N. of Ramsey, beating up channel against wind; to avoid collision with another vessel going before the wind put about vessel, missed stays, and struck.	Wr. 884
-	Unknown	Not	Unknown	Unknown	None	-	Leaky	off Belfast, put in; made for Ramsey, shipped new crew, making 17 in. water per hour; started again at command of owners; vessel manifesting signs of settling, put back again to save life.	Wr. 430.
-	£200	Unknown	Great	Unknown	None	-	Wrecked	on Mangold Head, being very foggy and probably defective compass. Light wanted on Mangold Head; recovered.	Wr. 440 „ 719 „ 1736
							DOUGLAS BAY.		
-	£200	Not	£35	£25 Liverpool.	None	-	Wrecked	at entrance to Douglas Harbour; heavy wind and cross sea running at harbour's mouth; so much injured that she must go to pieces.	Wr. 940.
-	£1,200	Lloyd's and Whitehaven.	Nil	Nil	None	-	Wrecked	North of Grandel Bay, near Douglas, Isle of Man; stress of weather caused the ballast to shift and vessel to drive on shore, where she went to pieces.	Wr. 513.
-	£500	Unknown	-	-	None	All, by boat	Wrecked	at Fleswic, near Douglas; could not make Douglas Head Light; total loss; stress of weather; ship missed stays.	Dep. 48. Wr. 69.
							DOUGLAS TO PORT MARY.		
-	£70	Not	£25	Not	None	3, by own boat	Wrecked	¼ of a mile E. of Santon Head; in thick fog vessel struck on the rock and immediately went to pieces; lead not hove. Total loss.	Wr. 984.
-	Total	Not	Total	Not	None	-	Wrecked	in the Bay of Derby Haven, Isle of Man; struck on a reef of rocks not marked in master's chart, and became a total wreck. Lead kept going.	Wr. 2735.
-	Unknown	Unknown	Unknown	Unknown	None	-	Stranded	on rocks in Bay of Derby Haven; beating into the bay, missed stays; did not obey her helm, and went ashore.	Wr. 2778.
-	£50	Not	£60	Not	None	3, by own boat	Wrecked	outside Langless Point, near the landmark, thick fog; vessel struck on the rocks, fell off, and sunk in deep water; lead not hove. Total loss.	Wr. 983.
n -	£250	Not	-	-	None	3, in ship's boat	Wrecked	near Port Mary, caused by the intemperance of the master. Total loss.	Wr. 261.

Return of Vessels in Distress (otherwise than by

PEEL.

Date of Casualty. 1.	Name of Vessel. — Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. — Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.
1857. (22) Oct. 6	Hugh Lupus, of Liverpool	Schooner	57	4	Whitehaven to Ellesmere	Iron	S.W.	7	Clear	12 night
23) Dec. 20	Earl of Carrick, of Ayr	Steam ship	135	13	Ayr to Liverpool	General	S.W.	10	Dark and rainy.	5 A.M.

PEEL TO POINT OF AYR.

Date of Casualty. 1.	Name of Vessel. — Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. — Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.
(18) Mar. 31	Mary Hoghton, of Liverpool	Schooner	70	4	Liverpool to Larne	Wheat	E.	11	Hazy	-
(20) Sept. 2	Ann, of Dundalk	Schooner	81	5	Dundalk to Whitehaven	Ballast	N.	6	Clear	11 A.M.
1856. (5) July 26	Elizabeth, of Strangford	Schooner	33	3	Whitehaven to Killoch	Coals	S.W.	9	Thick	9 A.M.

sts of the Isle of Man, during the Years 1856 and 1857—*continued.*

ge ed List.	Vessel. Estimated Loss on. 14.	Vessel. Insured for, and where. 15.	Cargo. Estimated Loss on. 16.	Cargo. Insured for, and where. 17.	Lives lost. 18.	Number of Lives saved and by what Means. 19.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage. 20.	Site and Cause of Casualty. — Remarks. 21.	Authority. 22.
					PEEL.				
-	£400 -	Not - -	Unknown	Unknown	None -	- - - -	Wrecked	off Peel Harbour; heavy sea and squally weather; ran for the harbour, when she struck heavily, filled and sunk; lead continually hove. Total loss.	Wr. 1993
-	£9,000 -	Unknown - Glasgow.	Unknown	Unknown	13 -	2, one with life buoy, one by swimming.	Wrecked	on Daily Point, 6 miles from Peel, Isle of Man; struck in a gale; weather dark and rainy; lights not constantly seen; on a lee shore, and went to pieces. Compasses said to be defective.	Wr. 2812
					PEEL TO POINT OF AYR.				
- years.	Unknown	Unknown -	Unknown	Yes -	5 -	- - - -	Wrecked	1 mile W. of Kirkmichael Beach, Isle of Man, and all hands lost.	Wr. 1435
- ed.	£100 -	Not - -	Nil -	Nil -	None -	- - - -	Stranded	2 miles S.W. of Point of Ayr; sprung a leak which moved the sand ballast, and caused her to settle by the stern and become unmanageable; drifted ashore and was secured.	Wr. 1826
-	£200 -	Unknown -	Nil -	- -	- -	- - - -	Wrecked	westward of Point of Ayr; weather very bad. Vessel undermanned and badly handled, or should with S.W. wind and flood tide have rounded the Point of Ayr.	Wr. 1695

RETURN of VESSELS in DISTRESS (otherwise than by Collision) in the BRISTOL CHAN

WEST OF MILFORD.

Date of Casualty. 1.	Name of Vessel. — Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. — Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.
1856. (77) Oct. 20	Jeane, of Whitehaven	Brig	170	9	Whitehaven to Cardiff	Iron	N.W.	9	Hazy	3 P.M.
(96) Dec.	Elizabeth, of Bridgewater	Schooner	47	4	Dublin to Cardiff	Potatoes	N.	9	Thick	11 A.M.
(28) Mar. 26	Medora, of Liverpool	Schooner	37	3	Liverpool to Hayle	General	S.E.	8	Clear	4 P.M.

MILFORD.

Date of Casualty. 1.	Name of Vessel. — Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. — Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.
1857. (103) Jan. 3	Koningen der Netherlanden, of Netherlands.	Ship	707	16	Callao to London	Guano	S.W.	10	Thick	11 A.M.
(105) ,, 3	Tweed, of Harrington	Brig	92	5	Gloucester to Waterford	Salt	S.W.	11	Thick	10 A.M.
(148) April 25	John Shelly, of Yarmouth	Brig	115	6	Swansea to Dordrecht	Pig Iron	S.S.W.	9	Thick	2 A.M.
1856. (14) Feb. 8	Great Duke, of Boston	Ship	1500	32	New Orleans to Liverpool	Cotton	S.S.W.	9	Thick	5 A.M. High water.
(45) June 12	Leonora Devas, of Llanelly	Schooner	96	6	Liverpool to Llanelly	Copper	W.	7	Hazy	8 30 A.M.
(60) Sept. 25	Isabella, of Troon	Schooner	65	4	Cardiff to Waterford	Coal	W.S.W.	7	Clear	7 P.M.
(86) Dec. 4	Danube, of Picton	Brig	160	9	Wallace to Liverpool	Timber	E.S.E.	9	Thick	12 30 A.M.
(91) ,, 7	Don, of Southampton	Schooner	160	7	Newport to Southampton	Coal	S.S.W.	10	Thick	1 A.M.
(92) ,, 9	Louis Munro, of Liverpool	Barque	300	13	Malta to Cardiff	Ballast	S.S.W.	10	Thick	6 30 P.M.
1857. (106) Jan. 3	Union, of Pembroke	Brig	120	6	Newport to Waterford	Coal	W.S.W.	11	Thick	9 A.M.
(114) ,, 12	Union, of Milford	Brig	102	6	Cardiff to Waterford	Coals	S.W. to W.	11	Thick	10 30 A.M.
(115) ,, 14	Maria and Martha, of Milford	Schooner	58	4	Newport to Liverpool	Coals	S.W.	11	Thick	6 30 A.M.
(116) ,, 16	Forrester, of Cork	Schooner	63	5	Chichester to Liverpool	Timber	S.W.	11	Thick	11 A.M.
(122) ,, 26	Mary Ann, of Llanelly	Schooner	83	5	Llanelly to Guernsey	Coals	W.S.W.	11	Thick	11 40 A.M.
(129) Feb. 15	Belle Poule, of Liverpool	Barque	334	14	Liverpool to Monte Video	General	W. by N.	9	Hazy	3 A.M.
(181) Oct. 22	Earl of Errol, of Irvine	Brig	95	6	Newcastle to Dublin	Coals	N.E.	9	Clear	9 P.M.

AVID'S HEAD to the LAND'S END, including the SCILLY ISLANDS, during the Years 1856 and 1857.

Age d assed 's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. —— Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
	14.	15.	16.	17.	18.	19.	20.	21.	22.
				WEST OF MILFORD.					
- -	Unknown	Whitehaven	None	Unknown	None	- - - -	Dismasted Partial.	between the N. and S. Bishops. Heavy gales and violent squalls and dangerous lee shore. To clear the rocks cut away masts and rigging, and anchored safely in Hubberstone Roads.	Wr. 2239
- -	Unknown	£150 - London.	None	Unknown	None	- - - -	Dismasted Partial.	near S. Bishops. Heavy sea struck the ship in a gale, and to prevent her driving cut away the masts, and got towed into Milford.	Wr. 2732
- -	Unknown	Unknown	None	None	None	- - - -	Stranded Partial.	on S. W. point, Ramsey Island. Ship missed stays, unshipped rudder, and got much damaged; put into Milford to discharge.	Wr. 967
				MILFORD.					
- -	Unknown	Unknown	Unknown	Unknown	None	- - - -	Stranded Partial.	on Hubberstone Pill. Anchors coming home during a severe gale, drove on the rocks, and compelled to discharge cargo to get her off.	Wr. 136
- -	Unknown	Not	Total	Not	None	- - - -	Stranded Total.	on Hubberstone Pill. Riding with two anchors, came home, drove, and struck with great force on the sands, and sustained so much damage as to become nearly worthless.	Wr. 237
- -	-	Yarmouth	None	Unknown	None	- - - -	Leaky Partial.	in Bristol Channel, and laid on the mud at Hubberstone Pill to discharge cargo.	Wr. 1328
-	£22,000	Unknown	£36,000	Unknown	29	3 - - -	Wrecked Total.	to westward of Ballslaughter Bay, near Milford, captain desiring to make quick passage, filled and ran before the wind. Strong gale. Ship got among breakers, and was dashed to pieces.	Wr. 372 Dep. 662
-	£500	Not	None	Unknown	None	- - - -	Dismasted Partial.	2 miles from Skomar Island (Milford). Carried away both masts by the rolling and pitching of a high and cross sea, and a strong wind; towed into Milford for repairs.	Wr. 1449
-	Unknown	£300 - Liverpool.	None	Unknown	None	- - - -	Distressed Partial.	2 miles from Lennyhead; much shook and strained from being struck by a heavy sea, and making water fast. Put into Milford to discharge and repair.	Wr. 1911 „ 1578
-	Unknown	Unknown	Unknown	Unknown	None	- - - -	Stranded Partial.	on the Stack Rocks of Milford; dragged her anchors in a gale of wind and went on the rocks; got off with assistance, and run on the ground at Hubberstone Pill.	Wr. 2610
-	£600	Not	Unknown	Not	None	- - - -	Stranded Total.	near Saundersfoot Pier, Milford; bore up for Milford in bad weather, and while waiting to get into harbour was cast ashore by a heavy ground sea, which parted all and left her a wreck.	Wr. 2785 „ 2787 „ 2822
-	Total	Unknown	Nil	Nil	9	4, washed ashore	Stranded Total.	on Marlous Sands, Milford Haven. Struck by heavy sea, ballast shifted, thrown on beam ends, and became a total loss.	Wr. 2629 „ 2664
l's -	Unknown	Not	Unknown	Unknown	None	- - - -	Stranded Partial.	under the cliff at Milford. Drove from her anchors in the storm of 3d January, and went ashore; will discharge and repair.	Wr. 283
-	Unknown	Not	None	Unknown	None	- - - -	Stranded Partial.	on the rocks near Milford; came to an anchor; wind increased to hurricane; parted both anchors, and drove in rocks; struck heavily; lightened, and got into Hubberstone Pill.	Wr. 325
-	Unknown	£200 - London.	None	Not	None	- - - -	Stranded Partial.	near the Old Dockyard, Milford; drove from her anchors in a gale of wind; became bilged; bottom stove in; master got her off after great exertions.	Wr. 370
- -	Unknown	Not	None	Unknown	None	- - - -	Stranded Partial.	near Old Dock, Milford; came to an anchor off Hubberstone Pill; vessel began to drive; let go best bower, when gale blew with such violence that anchors came home, and she drove broadside on the beach; got off to discharge and repair.	Wr. 412
- -	Unknown	Not	None	Unknown	None	- - - -	Stranded Partial.	on rocks near Milford; drove with her anchors in a terrific gale, and dashed on the rocks, by which her keel was broken and bottom much damaged; got off, taken to Hubberstone Pill.	Wr. 577
- -	Unknown	London	None	Unknown	None	- - - -	Dismasted Partial.	off Bardsey; ship in a gale, plunging violently into the sea, sprung bowsprit, and carried away jib-boom; put into Milford to discharge and repair.	Wr. 725
- -	Total	Not	Total	Not	None	- - - -	Wrecked Total.	on the east side of St. Ann's Head, Milford Haven. Sprung a leak; filled; became unmanageable; struck on the rocks; bilged, and became a wreck. Assistance declined by the master.	Wr. 2329 „ 2382

Return of Vessels in Distress (otherwise than by Collision) in the Bristol Channel, from St.

Date of Casualty.	Name of Vessel. — Port of Registry (if known.)	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind.		Weather.	Hour and Time of Tide.
							Direction.	Force.		
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1856. (83) Nov. 15	Speculation, of Aberystwith	Schooner	41	4	Barrow to Newport -	Iron -	N.W.	5	Cloudy -	2 30 A.M. -
1857. (145) April 17	Gesina, of Groningen -	Galleon -	64	4	Cardiff to Liverpool -	Coals -	W.S.W.	9	Thick -	1 P.M. - -

SEA.

Date of Casualty.	Name of Vessel. — Port of Registry (if known.)	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind Direction.	Wind Force.	Weather.	Hour and Time of Tide.
(178) Oct. 15	Angelina, of Cardigan -	Brigatine	96	6	London to Galway -	Guano -	W.	8	Clear -	8 A.M. - -
1856. (2) Jan. 3	Vesta, of Griefswould -	Brig -	367	10	Cardiff to Marseilles - -	Coals -	S.	8	Thick -	8 P.M. - -
(9) Feb. 2	Sarah Fleming, of Dartmouth	Brig -	368	13	Cardiff to Malta - -	Coals -	S.S.E.	8	Thick -	- - -
(22) „ 29	Raven, of Sunderland -	Brig -	283	11	Cardiff to Constantinople -	Coals -	S.W.	10	Clear -	8 30 A.M. Low water.
(61) Sept. 25	Henry Holman, of Plymouth	Schooner	156	8	Smyrna to Liverpool -	Valonia -	E.N.E.	9	Hazy -	1 30 P.M. -
(76) Oct. 20	Lunaria, of Aberystwith -	Barque -	206	10	Swansea to Alexandria -	Coals -	W.N.W.	10	Hazy -	4 P.M. - -
(93) Dec. 27	John Wray, Great Yarmouth	Polcre -	99	5	Liverpool to Santander -	Wheat -	S.W.	9	Gale cloudy.	Midnight -
1857. (113) Jan. 12	Cynosure, of Salcombe -	Schooner	138	8	Leghorn to Liverpool -	General -	W. to N.W.	11	Thick -	7 30 A.M. -

LENNY HEAD TO CARMARTHEN BAY.

Date of Casualty.	Name of Vessel. — Port of Registry (if known.)	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind Direction.	Wind Force.	Weather.	Hour and Time of Tide.
(121) „ 24	Speculator, of Exeter -	Smack -	21	2	Saundersfoot to Pembroke -	Culm -	N.N.E.	9	Clear -	- - -
(140) Mar. 27	Amelia, of Bristol -	S.S. -	167	16	Bristol to Liverpool - -	General -	S.	4	Thick fog	8 P.M. -
(167) Sept. 12	Fusilier, of Liverpool -	Ship -	503	19	Valparaiso to Liverpool -	Copper -	S.	5	Thick fog	Midnight -
1856. (88) Dec. 7	Neuvo Torcuarto, of Valencia	Schooner	176	9	Swansea to Valencia -	Coal -	S.S.W.	10	Bad and thick.	6 15 - -
1857. (109) Jan. 10	Gave, of Bayonne - -	Brigantine	109	7	Cameat to Llanelly - -	Ballast -	N.W.	7	Thick -	10 30 P.M.
(165) Aug. 19	Three Sisters, of Aberystwith	Schooner	64	4	Newport to Liverpool -	Iron -	N.E.	2	Hazy -	10 P.M. -

CARMARTHEN BAY.

Date of Casualty.	Name of Vessel. — Port of Registry (if known.)	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind Direction.	Wind Force.	Weather.	Hour and Time of Tide.
1856. (75) Oct. 3	Jules, of Granville - -	Ketch -	65	5	Eberient to Llanelly -	Ballast -	S.W.	9	Thick -	3 A.M. -
1857. (102) Jan. 3	Pursuit, of Carmarthen -	Schooner	72	4	Newport to Carmarthen -	Coal -	W.S.W.	11	Thick -	12 15 P.M. -
(104) „ 3	Volusia, of Belfast - -	Schooner	70	4	Tenby to Dublin - -	Bark -	W.S.W.	11	Thick sleet	3 45 P.M. -
(128) Feb. 12	Camden, of Aberystwith -	Schooner	69	5	Neath to Saltney - -	Iron -	S.S.W.	9	Thick -	2 A.M. -

d to the Land's End, including the Scilly Islands, during the Years 1856 and 1857—*continued.*

sel's Age and classed oyd's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. — Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
- -	£400	£400	Unknown	Unknown	None	- - - -	Wrecked Total.	off Lenney Head, Pembroke. Struck upon a rock, the existence of which the master was not aware; came off, and instantly filled and went down in deep water. Lead not hove.	Wr. 2373 „ 2473
s - -	Nearly total.	£300. Groningen Pekela.	2/3 of cost	Not	None	4, by line from shore	Stranded Partial.	on Marlous Sands, owing to a thick fog; ship got close to land, became embayed, and could not beat out. Nearly total loss.	Wr. 1319

SEA.

wn	Unknown	None	Unknown	Unknown	None	- - - -	Dismasted Partial.	40 miles S. by E. of Cape Clear, in heavy squall. put into Milford to discharge and repair.	Wr. 2108
- - classed.	Unknown	Unknown	Unknown	Unknown	None	- - - -	Leaky Partial.	in heavy gale at sea, W.S.W. of Scilly; put into Milford to discharge.	Wr. 147 Dep. 191
s - -	Unknown	£1,500 Topsham,	-	-	None	- - - -	Leaky Partial.	Sprunk a leak in lat. 49° 45′ N., long. 9° W.; bore up to Milford, the pumps constantly going. Cargo discharged at Milford.	Dep. 487.
- -	Unknown	Unknown	Unknown	Unknown	None	- - - -	Leaky Partial.	Sprung a leak in lat. 47° 10′, long. 8° 10′ West, in consequence of tremendous gales and cross seas; obliged to bear up for Milford to discharge and repair.	Wr. 723
- -	Unknown	£1,800	None	Unknown	None	- - - -	Dismasted Partial.	off Arklow, having lost rudder and being much damaged in a gale; cut away her mainmast to prevent her getting on shore. Towed into Milford to discharge and repair.	Wr. 1768
ths	Unknown	£3,000 London.	None	Unknown	None	- - - -	Dismasted Partial.	in lat. 49° 35′ N., long. 8° 27′. and leaky. Put into Milford to discharge and repair.	Wr. 2126.
- - 10 years.	£170	£800 Selby and Goole.	Unknown	Liverpool	None	- - - -	Dismasted Partial.	and distressed 60 miles W.N.W. of Milford by stress of weather. Put into Milford to discharge and repair.	Wr. 2831.
s - -	Unknown	£700 London.	Unknown	Unknown	None	- - - -	Dismasted Partial.	70 miles S.W. of Saltees, in a furious gale and high sea, which struck the ship and laid her on her beam ends; bore up for Milford, much damaged, to discharge and repair.	Wr. 314.

LENNY HEAD TO CARMARTHEN BAY.

- -	Total	£250 Topsham.	Total	Unknown	1	1, by "Elizabeth and Mary."	Wrecked Total.	on Crowstoe Rock, off Lenny Head; tried to make the land for shelter, but she would not stay; wore round; squall threw her on her beam ends, and sea breaking over her, became total wreck; bilged and sunk.	—
- -	Unknown	Unknown	Unknown	Unknown	None	- - - -	Foundered Total.	off St. Gowan's Head, Pau; ran on rocks in a thick fog.	Wr. 1050
- -	£11,000	London and Liverpool.	£50,000	London & Liverpool.	None	- - - -	Wrecked Total.	on St. Gowan's Head, Ballslaughter Bay. Strong tides, mistaken reckoning, thick weather, and neglect of the lead.	Wr. 1876 „ 1886
wn	£1,600	Unknown	Unknown	Unknown	None	9, by a life-boat	Stranded Total.	a mile from Tenby on S. strand between Castle Hill and Gillon Head. Parted cables in Caldy Roads and drove ashore, and in 2 hours after went to pieces. Crew saved by life boat at great risk.	Wr. 2624
- -	£500	Not	Nil	Nil	None	- - - -	Abandoned Total.	Sprung a leak 3 miles E.S.E. from Tenby; sand ballast washing about choked pumps; bailed out to no purpose, and finding water gaining, anchored, and finally abandoned her. She went down soon afterwards.	Wr. 466
s	£600	Unknown	£1,000	Not	None	- - - -	Wrecked Total.	on Monckstone Rock, Bristol Channel. Struck on ebb tide, and as tide flowed she fell over and sunk in deep water. Night being hazy, master deceived in the distance from Hely Light.	Wr. 1759 „ 1769

CARMARTHEN BAY.

ths	£850	Unknown	Unknown	Unknown	1	- - - -	Wrecked Total.	between the islands of Caldy and St. Margarets.	Wr. 2091
- -	Unknown	Not	Nil	Not	None	- - - -	Dismasted Partial.	while at anchor in Caldy Roads. Very deeply laden, and not only driving, but sea breaking over her fearfully. Cut away her masts to save her.	Wr. 194
s - -	Unknown	Not	Unknown	Unknown	None	- - - -	Dismasted Partial.	while at anchor in Caldy Roads. Masts cut away in a heavy gale to avoid driving on board a ship riding in her wake.	Wr. 195
- -	Unknown	Aberystwith	None	Unknown	None	- - - -	Leaky Partial.	off Caldy, Bristol Channel; cargo shifted through bad weather, breaking both pumps and causing her to strain and leak; put into Milford for repair.	Wr. 705

Return of Vessels in Distress (otherwise than by Collision) in the Bristol Channel, from St

Date of Casualty. 1.	Name of Vessel. Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.
1856. (51) July 15	Pryde, of Liverpool	Schooner	85	5	Londonderry to Gloucester	Grain	W.	3	Foggy	10 30 P.M.
(87) Dec. 6	Clemence, of Libourne	Schooner	78	6	Belle Isle to Newport	Ballast	S.S.W.	9	Thick, with Rain.	3 P.M.
1857. (108) Jan. 10	Hippolyte and Marie, of Bayonne.	Brig	93	7	Dovainenez to Swansea	Ballast	W.	9	Thick	4 A.M.
1856. (8) „ 24	Amelia, of Newcastle	Schooner	249	10	Milford to Antwerp	Grain	S.W.	9	Hazy	4 46 A.M. ½ flood.
(82) Nov. 3	Letitia, of Dublin	Sloop	29	4	Dublin to Bristol	Potatoes	E.S.E.	4	Thick and hazy.	½ ebb
1857. (174) Oct. 7	French lugger	Lugger	70	4	Unknown	Ballast	S.S.W.	10	Gale	3 P.M.
1856. (1) Jan. 3	Uranie, of Granville	Brig	122	8	Granville to Llanelly	Ballast	S.E.	4	Thick and dark.	8 P.M. 6 hours ebb.
(40) May 14	Madam, of Belfast	Schooner	95	5	Swansea to Belfast	Coals	N.W.	11	Stormy	1 P.M.

HELWICK POINT TO OXWICH BAY.

Date of Casualty. 1.	Name of Vessel. Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.
1857. (61) Aug. 5	Eleanor, of Barmouth	Schooner	32	3	Gloucester to Folkestone	Salt	W.	4	Clear	1 15 P.M.
1856. (73) Sept. 29	Cyfarthfa, of Port Madoc	Smack	33	3	Cardiff to Port Madoc	Coals	S.S.W.	10	Thick	3 A.M.

OXWICH BAY.

Date of Casualty. 1.	Name of Vessel. Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.
(13) Feb. 8	Catherine Jenkins, of Swansea.	Barque	399	11	Cuba to Swansea	Copper	S.S.E.	1	Thick	3 30 A.M.
1857. (172) Oct. 7	Newton, of Bideford	Schooner	53	3	Oxwich to Bideford	Limestone	S.E.	10	-	6 A.M.

MUMBLES AND SWANSEA.

Date of Casualty. 1.	Name of Vessel. Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.
1856. (62) Sept. 27	Monkey, of Drogheda	Schooner	81	6	Newport to Liverpool	Coals	S.E.	10	Rain	12 30 A.M. Low water.
(63) „ 27	Wave, of Liverpool	Brigantine	119	6	Swansea to Portsmouth	Coals	S.E.	10	Rain	2 A.M.
(64) „ 27	Thomas, of Bideford	Brig	75	4	Newport to Portreath	Coals	S.E.	10	Thick	2 A.M.
(65) „ 27	Happy Return, of Falmouth	Sloop	48	4	Newport to Falmouth	Coals	S.E.	10	Rain	2 A.M.
(66) „ 27	Ammet, of Aberystwith	Schooner	41	4	Newport to Aberystwith	Coals	S.E.	10	Rain	2 A.M.
(67) „ 27	Amity, of Bristol	Sloop	51	4	Newport to Milford	Coals	S.E.	10	Rain	2 30 A.M.
(68) „ 27	Pioneer, of Exeter	Brig	90	6	Newport to Chatham	Iron	S.E. to S.S.E.	10	Rain	2 A.M.
(69) „ 27	Henrietta, of Barnstaple	Schooner	37	3	Swansea to Barnstaple	Culm	S.E.	10	Rain	2 A.M.
(70) „ 27	Western Star, of New Ross	Schooner	47	6	Port Talbot to Featherd	Coals	S.E.	10	Rain	2 A.M.

to the Land's End, including the Scilly Islands, during the Years 1856 and 1857—*continued.*

's Age d assed l's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
	14.	15.	16.	17.	18.	19.	20.	21.	22.
	£100	Liverpool	Unknown	Liverpool	None	-	Stranded Unknown.	on the Hooper Sandss, in Carmarthen Bay. Thick weather, and heavy swell setting on the bar from the W.	Dep. 1601 Wr. 1638
t.	£480	£200	Nil	Nil	None	-	Wrecked Total.	on Pentywan Point, Carmarthen Bay. Lost sails and spars, and sprung foremast; vessel old and rotten.	Wr. 2645 „ 2641 „ 2643
	£1,200	£320	Nil	Nil	None	-	Stranded Total.	on Fowyn Sands, Kidwelly, in Carmarthen Bay; loss of sails; heavy and thick weather, and error in judgment on part of master; ran ashore and became total loss.	Wr. 437
	Unknown	Unknown	Unknown	Unknown	9	1, by pilots at Llanelly	Wrecked Total.	on No. 3 buoy, Burry River, by stress of weather. Total loss.	Wr. 240 „ 254
	Unknown	Unknown	£160	Unknown	None	-	Stranded Total.	on the Hooper Sands, Burry River. Run ashore to save life after the vessel had sprung a leak	Wr. 2360
	Unknown	Unknown	Unknown	Unknown	4	-	Wrecked Total.	off at entrance of Burry River; particulars cannot be ascertained.	Wr. 11,866
ssed.	£600	Unknown	-	-	None	9, by boat	Wrecked Total.	on Hooper Sands, entrance of Llanelly Harbour. Could not get a pilot, and anchored in an improper place.	Wr. 66 Dep. 83
	Unknown	Unknown	Unknown	Unknown	1	-	Distressed Partial.	labouring in heavy sea; lost cables and anchors; shipped a heavy sea on Llanelly Bar, which carried away stanchions, galley, bulwarks, &c., and washed a man overboard. Got into Llanelly Harbour to repair.	Dep. 1372

HELWICK POINT TO OXWICH BAY.

's Age d assed l's List.	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.	Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty.	Site and Cause of Casualty. Remarks.	Authority.
	Total	Unknown	Total	Unknown	None	3, by "Six Brothers"	Foundered Total.	5 miles from Helwick Light and 111 from Caldy; having sprung a leak, which gained on them until she sank.	Wr. 1711
	Total	Port Madoc Club	Total	Not	None	-	Foundered Total.	off St. Ann's Light, Abereithy. Struck with a heavy sea in a gale, which caused her to spring a leak, fill, and sink.	Wr. 1930

OXWICH BAY.

's Age d assed l's List.	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.	Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty.	Site and Cause of Casualty. Remarks.	Authority.
ss.	£5,000	Unknown	Unknown	Lloyd's	7	4, washed on the rocks	Wrecked Total.	1 mile W. of Oxwich Point, Bristol Channel. Set of tide, heavy swell, and want of caution. The lead does not appear to have been hove. Crew got into a small boat, which capsized. Seven were drowned.	Dep. 371 Wr. 444
	Unknown	Unknown	Unknown	Unknown	None	-	Stranded Partial.	in Oxwich Bay, S. Wales. Lost her bowsprit in a gale, and came ashore greatly damaged.	Wr. 2402

MUMBLES AND SWANSEA.

's Age d assed l's List.	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.	Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty.	Site and Cause of Casualty. Remarks.	Authority.
	Unknown	Unknown	Unknown	Unknown	None	6, by coastguard boat	Foundered Total.	in Mumbles Roads. Riding out a gale the schooner "Swiftsure" drove from her anchors, and came foul of them; began to make water, and shortly after sank.	Wr. 1982 „ 2015
	Unknown	Unknown	Unknown	Unknown	None	-	Stranded Partial.	in Mumbles Roads. Ship striking heavy, and making much water; gale increasing, parted chains, and cargo thrown overboard.	Wr. 1984 „ 2017
	Unknown	Unknown Lloyd's.	Unknown	Unknown	None	-	Stranded Partial.	in Mumbles Roads. Wind shifted, which caused her to part from her anchors, and run ashore.	Wr. 2013
	Unknown	Not	Unknown	Unknown	None	-	Stranded Partial.	in Mumbles Roads; wind shifted; blew a gale. Ship drove from anchors, and run ashore.	Wr. 2013
	£200	£200 Lloyd's.	Unknown	Unknown	None	-	Foundered Total.	in Mumbles Roads; wind shifted; heavy sea drove the vessel from anchor against other ships. She sustained severe damage and went down.	Wr. 2011
	Unknown	Unknown	Unknown	Unknown	None	-	Foundered Total.	in Mumbles Roads; precisely same as the preceding entry.	Wr. 2011
	Unknown	Lloyd's	Not	Not	None	6, by a shore pilot	Stranded Partial.	off the Mumbles Roads; heavy gale; forced to run; ship struck at low water, unshipped rudder; started stern post, which caused her to fill and sink; recovered and taken to Swansea, after discharging cargo.	Wr. 2090 „ 2001
	Unknown	Unknown	Unknown	Unknown	None	-	Stranded Unknown.	in Mumbles Roads; wind shifted very suddenly, and blew a heavy gale, with heavy sea, which caused her to drive on shore.	Wr. 2017
	Unknown	Unknown	Unknown	Unknown	None	6, by coastguard boat	Leaky Unknown.	Drove from anchor in Mumbles Roads, "Swiftsure" and other vessels came in contact with this and other ships by stress of weather, having parted from anchor in gale of wind.	Wr. 2015

Return of Vessels in Distress (otherwise than by Collision) in the BRISTOL CHANNEL, from St.

Date of Casualty.	Name of Vessel. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind.		Weather.	Hour and Time of Tide.
							Direction.	Force.		
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1857. (175) Oct. 8	Jane Maria, of London -	Brig -	195	10	Swansea to Fayal - -	Coals -	W. by N.	9	Hazy -	9 P.M. - -
1856. (26) Mar. 18	True Blue, of Teignmouth -	Schooner	73	5	Newport to Brest - -	Iron -	E.S.E.	3	Very thick	8 A.M. -
(36) April 26	Brigantine, of Padstow -	- -	- -	- -	- - - -	Coals -	- -	9	- -	- - -
(53) July 25	Floke, of Stavangar -	Schooner	173	8	Cork to Messina - -	Steam coal	W.	4	B. C. -	10 A.M. -
(71) Sept. 27	Favourite, of Cardigan -	Sloop -	51	4	Cardigan to Havre - -	Copper -	S.E.	9	- -	- - -
(72) „ 27	Economy, of Cork - -	Schooner	133	7	Newport to Cork - -	Coals -	W.N.W.	5	Hazy and dark.	9 30 P.M. -
(79) Oct. 22	Star, of Bude - -	Sloop -	34	3	Swansea to Bude - -	Culm -	S.S.E.	5	Dark -	7 P.M. -
(89) Dec. 7	Richardson, of Swansea -	Barque -	367	16	Coquimbo to Swansea -	Copper -	S.W.	10	O. R. -	2 30 A.M. -
1857. (132) Mar. 13	Juanita, of Bilbao - -	Lugger -	84	7	Swansea to Seville - -	Coals -	W.S.W.	8	- -	4 P.M. -
(138) „ 21	Morfa, of Swansea - -	Smack -	37	3	Bristol to Swansea - -	General -	S.E.	5	Fine -	10 A.M. -
(156) July 7	Theodore, of London -	Barque -	249	11	Port Talbot to Sweden -	Coke, &c.	W.N.W.	5	Clear -	6 A.M. - -
(185) Dec. 4	Chester, of Southampton -	Schooner	97	6	Southampton to Port Talbot	Timber -	Calm.	0	Fair -	9 A.M. - -
(126) Feb. 5	Mary Sophia, of Sunderland	Brig -	261	10	Bordeaux to Stettin - -	Ballast -	Variable	3	Thick -	4 30 A.M. -

PORTHCAWLE.

1856. (6) Jan. 14	Blanch, of Aberdovey -	Schooner	80	4	Whitehaven to Newport -	Iron ore -	E.N.E.	6	Frosty -	2 A.M. - Low water.
(11) Feb. 7	Bon Leon, of Nantes -	Schooner	76	5	(No particulars of this wreck can be obtained.)	- -	- -	- -	- -	- - -
(52) July 23	Star of the West, of Plymouth	Brigantine	176	7	Swansea to Messina - -	Iron -	S.E. & S.W.	6	Rainy -	8 A.M. - High water.
1857. (99) Jan. 3	Theodor, of Trieste - -	Brig -	230	11	Lisbon to Cardiff - -	Ballast -	S.S.W.	10	O.R. 2 -	11 A.M. -
(100) Jan. 3	Feronia, of Youghal - -	Schooner	109	6	Youghal to Newport - -	Timber -	S.S.W.	10	O.R. 2 -	2 P.M. - -
(141) Mar. 29	Trevaunance of Saint Agnes	Schooner	70	4	St. Agnes to Swansea -	Ore -	S.E.	6	- -	3 A.M. -
(155) July 6	Castle, of Newport - -	Schooner	40	1	Port Talbot to Porthcawle -	Tin, Cinders.	- -	8	- -	- - -

l to the Land's End, including the Scilly Islands, during the Years 1856 and 1857—*continued.*

el's Age and classed rd's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. — Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
wn -	London -	None - -	Unknown	Unknown	None -	- - - -	Leaky Partial.	in Mumbles Roads. Heavy sea strained the ship, and after ineffectual efforts to get to sea, obliged to put back to be overhauled, and discharged for repairs.	—
s -	£100 -	Unkown -	None -	Unknown	None -	All, in own boat -	Stranded Partial.	on Lavarnock Reefs, Swansea. Very thick weather and strong current; became leaky and seriously damaged.	Wr. 929 Dep. 971
- -	- -	- -	- -	- -	- -	- - - -	Abandoned Total.	and found derelict 7 or 8 miles from the Foreland, Swansea, by the "Swan," of Bideford, and delivered to receiver.	Dep. 1237
hs -	Unknown	Unknown -	Nil -	Unknown	None - 3 injured.	- - - -	Explosion Partial	in Swansea Harbour. Ship loaded with steam coal; the main hatchway was battened down. Coal wet when loaded, and not sufficient vent for escape of gas.	Wr. 1685
wn -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Stranded Partial.	near Swansea; slipped from both anchors and ran ashore to save ship and cargo. Got off, and taken into Swansea for repairs and discharge.	Dep. 2004
s -	£450 -	Not - -	£100 -	Not -	None -	- - - -	Wrecked Total.	on Breaksea Point; dark night; hazy weather; lead not hove; bilged and sunk (Swansea).	Wr. 2012
s -	£200 -	Not - -	£22 -	Not -	None -	3, by ropes from shore	Stranded Total.	at back of Swansea Pier Head Light. Stood too close to Pier Head to land pilot.	Wr. 2344
s ars. -	£1,000 -	Topsham -	None	Not -	None -	- - - -	Stranded Partial.	1 mile W. of Swansea Pier Head, having parted from anchors in heavy gale and sea; lightened and got off, and into Swansea Dock much damaged.	Wr. 2644
n -	Unknown	Unknown -	Unknown	Unknown	None -	- - - -	Stranded Total.	in Swansea Bay; parted one chain, brought up with the other in bad berth, could not get pilot, struck heavily, and after hours of pumping was run on shore, where she will become total wreck.	Wr. 841
s -	£150 -	Not - -	Unknown	Unknown	None -	- - - -	Stranded Partial.	in gale of wind S.W. of the Kymin, near Swansea; missed stays, and not having room to bring up, drove ashore; the second anchor was inboard, and the chain so placed that it could not be got ready in less than an hour.	Wr. 987
s -	Unknown	Hartlepool and Lloyd's.	Nil -	Unknown	None -	- - - -	Stranded Partial.	on Port Talbot while in tow and while in charge of pilot, who thought there was plenty of water on the bar, which was not the case, being only a heavy swell.	Wr. 1684
-	Unknown	Shoreham -	Unknown	Not -	None -	- - - -	Stranded Partial.	at Port Talbot; two hours ebb tide and wind died away; lost steerage-way and drove out of channel on the sands.	Wr. 2523
-	Unknown	Unknown -	Nil -	Nil -	None -	- - - -	Stranded Total.	on Aberavon Sands; and was lost through the negligence and want of sobriety on the part of the master and mate, who took no steps to relieve the ship.	Wr. 679 ,, 803

PORTHCAWLE.

13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
s -	Unknown	Unknown -	Unknown	Unknown	2	2, by own boat - -	Wrecked Total.	on Skerwether Shoal, 5 miles to westward of Porthcawle. Master made an error in reckoning.	Wr. 141
- -	- -	- - -	- -	- -	5 crew and 2 from shore.	- - - -	Wrecked Total.	off Porthcawle; all hands lost, and 2 men drowned in their attempt to reach the wreck.	Wr. 490
d -.	Unknown	£1,600 Topsham. -	Nil -	Unknown	None -	- - - -	Leaky Partial.	through striking the bottom of Porthcawle Harbour in the heavy wash of the sea. Put into harbour to discharge and repair.	Wr. 1710
wn -	Unknown	Trieste - -	Unknown	Unknown	- -	- - - -	Stranded Partial.	eastward of Porthcawle Pier while running in for safety. Was first warned by coastguard signal, then let go anchor in error, and not being able to hold on or make the harbour, drove on the beach and was much damaged.	Wr. 42 ,, 426
-	Unknown	Unknown -	Nil - -	Unknown	- -	- - - -	Stranded Partial.	eastward of Porthcawle, having become unmanageable by loss of sails and spars, and not able to make the harbour, ran on shore to save lives and vessel. Seriously damaged.	Wr. 42 ,, 427
n -	Unknown	Unknown -	Unknown	Unknown	1	3, by boat from shore -	Stranded Total.	on Hugo Bank, Porthcawle; weather very thick, no pilot offering, kept her to windward, when she struck; filled and sunk.	Wr. 1059 ,, 1156 ,, 1154
-	Unknown	Nil -	Unknown	Nil -	None -	- - - -	Wrecked Total.	off Porthcawle. Not being able to procure assistance, took vessel to sea alone. Came on to blow; let go the anchor; struck and sunk in 10 fathoms water.	—

Return of Vessels in Distress (otherwise than by Collision) in the BRISTOL CHANNEL, from St.

Date of Casualty.	Name of Vessel. Port of Registry (if known).	Rig.	Tons.	Men.	From. Bound to.	Cargo.	Wind.		Weather.	Hour and Time of Tide.
							Direction.	Force.		
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.

TUSKAR ROCK TO CARDIFF.

856. (34) Nov. 20	Star of Hope, of London	Brig	218	10	Bristol to Swansea	General	W.N.W.	4	Moderate; thick.	1 hour of low water.
(18) Feb. 15	Mette Magrath, of Norway	Barque	148	13	Cardiff to Malta	Coals	W.S.W.	7	Thick	- -
1857. (117) Jan. 18	Sincerity, of Cardigan	Schooner	59	4	Par to Gloucester	Stone	W. by N.	6	Thick	8 P.M.
(107) „ 8	Superior, of Cork	Schooner	82	5	Cardiff to Cork	Coals	N.E. by N.	7	Dark and cloudy.	6 P.M.
(150) May 16	Maid of Erin, of Cork	Schooner	100	6	Newport to Cork	Coals	W.N.W.	4	Fine	3 30 A.M.
1856. (24) Mar. 9	Jane, of Aberystwith	Schooner	82	6	Barrow to Newport	Iron ore	E.	1	Thick	7 A.M. High water.
(56) Aug. 18	Friends, of Cardiff	Smack	55	4	Bristol to Cardiff	General	N.N.E.	10	Stormy	9 A.M.
(94) Dec. 29	Charles M'Lachlan, Yarmouth, N.S.	Brig	236	9	Cardiff to Martinique	Coals	S.W.	5	Cloudy	5 P.M.

CARDIFF.

(23) Mar. 8	Jane Frances, of Waterford	Schooner	48	4	Waterford to Newport	Oats	Calm	0	Hazy	7 45 P.M.
(37) April 27	Adele, of St. Malo	Schooner	111	7	Cardiff to Marseilles	Coals	E.	3	Cloudy	8 30 A.M.
(80) Oct. 27	Fred. Ridzlaff, of Stettin	Barque	467	14	Cardiff to Hamburg	Coals	N.E.	4	Cloudy	5 30 A.M.
(90) Dec. 7	Ford Mills, of Sunderland	Brig	223	8	Cardiff to Malaga	Coke	S.W.	10	O.R.	2 P.M.
(95) „ 29	Tribune, London	Brig	189	9	Bristol to Cadiz	Wheat	W.	3	Squally	2 P.M.
(10) Feb. 6	Wolfe, of Cardiff	Ship	1,263	39	Cardiff to Mile Grace	Coals	S.W.	10	Stormy	5 P.M.
(16) „ 9	Lady Campbell, of Waterford.	Barque	333	14	Cardiff to Waterford	Coals	W.S.W.	3	Clear	1 30 A.M.
(42) May 18	Margaret, of Kilrush	Smack	40	4			W.N.W.	8	Hazy	5 40 High water.
1857. (125) Jan. 30	Martha, of Bridgewater	Smack	23	3	Cardiff to Bridgewater	Coals	W.S.W.	5	Fine	4 30 P.M.
(130) Feb. 28	Nicolai et Jovan, of Trieste	Ship	700	18	Cardiff to Trieste	Ballast	Variable.	2	Fine	- -
(131) „ 28	Isabella Croll, of Liverpool	Schooner S.S.	421	16	Whitehaven to Cardiff	Iron ore	Variable.	2	Hazy	5 30
(171) Oct. 6	Mary, of Waterford	Brigantine	108	6	Cardiff to Waterford	Coals	S.S.E.	9	Cloudy	10 A.M.

ead to the Land's End, including the Scilly Islands, during the Years 1856 and 1857—*continued.*

essel's Age and ow classed Lloyd's List. 13.	Vessel. Estimated Loss on. 14.	Vessel. Insured for, and where. 15.	Cargo. Estimated Loss on. 16.	Cargo. Insured for, and where. 17.	Lives lost. 18.	Number of Lives saved, and by what Means. 19.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage. 20.	Site and Cause of Casualty. —— Remarks. 21.	Authority. 22.
TUSKAR ROCK TO CARDIFF.									
onths years.	£3,000	Unknown	Unknown	Unknown	None	- - -	Wrecked Total.	on Tuskar Rocks, and drifted on rock at Sutton Beach; in tow of steam tug, which got on the rock, and vessel having plenty of reach got on afterwards. Expected to go to pieces.	Wr. 2487 „ 2496
y old	-	£2,000 Norway.	-	-	None	- - -	Leaky Partial.	Sprung a leak off the Nash Light, Bristol Channel, by stress of weather, crew refused to proceed; put back to Bristol to discharge and repair.	Wr. 630
ars l.	£350	London	£200	Not	None	- - -	Stranded Total.	on Nash Sands; thick weather; saw breakers on lee bow; put helm down, then missed stays and went ashore on Nash Sands; vessel filled and sunk; lead not hove, the line being lost.	Wr. 511
ars t.	£300	Not	£50	Not	None	- - -	Wrecked Total.	on Breaksea Point; became leaky in bad weather, and when it seemed probable to save the ship another squall took her; she bilged and became a total wreck.	Wr. 256
ars	Unknown	Not	Unknown	Not	None	- - -	Stranded Partial.	west of Breaksea Point; ran ashore by standing too long on the port tack; all hands supposed to have been asleep; cargo discharged. May be got off.	Wr. 1395
rs	Unknown	London and Wales.	Nil	Unknown	None	- - -	Stranded Partial.	at entrance of Aberthaw Harbour, owing to the foggy weather; will have to discharge cargo to get her off at highest tides.	Wr. 866
ars t.	£160	Not	£2,000	Not	None	- - -	Wrecked Total.	off Redbrink Cliff, E. end of Barry Island. Stress of weather. Total loss.	Wr. 1700
rs t.	£1,000	Unknown	£100	Unknown	None	9, by coastguard boat	Stranded Total.	off Barry Island. Hove to in a gale of wind, having sprung a leak, which increased; master ran her ashore to prevent her sinking. Dragged anchors. Got on rocks, bilged, and became a wreck.	Wr. 13
CARDIFF.									
ars	£300	Not	£1,200.	Unknown	None	All, in ship's boat	Foundered Total.	near E. Cardiff Sands, having sprung a leak by grounding on her anchor in swinging; calm weather and strong spring tide.	Wr. & Dep. 126 „ 827 „ 830 „ 4096
ears class.	None	Unknown	None	Unknown	4, much burned, not killed.	- - -	Explosion Unknown.	in Bute Dock, Cardiff, from coal gas. Hatchways open; no fire below; cause unaccountable. Four men seriously injured.	Wr. 1301
nths l.	£3,000	£5,500 Stettin.	£150	Not	4	10, by boats from ships	Explosion Partial.	from coal gas, E. side W. Bute Dock, Cardiff; very seriously damaged. Hatches incautiously closed, and large quantity of gas generated.	Wr. 2289
ars	Unknown	Sunderland	Unknown	Unknown	None	- - -	Stranded Total.	in Rossili Bay, 1 mile S. of Burry Holmes, Cardiff. 2 anchors down; drove into broken water in the bay; cut away masts and then beached her, which was done admirably.	Wr. 2644 „ 2775
own	Unknown	£1,600 Lloyd's.	Unknown	Unknown	None	- - -	Stranded Partial.	on the W. spit of Cardiff Sands. Vessel lying at anchor; breeze increasing; chain parted; drifted on sand, and rubbed off a large quantity of her copper.	Wr. 31
rs t classed	-	Yes	Unknown	Unknown	None	All	Leaky Partial.	Sprung a leak in lat. 47° 16′ N., long. 12° 16′ W., in consequence of the heavy gale. Put back to Cardiff to discharge and repair.	Wr. 473 „ 474 Dep. 504
ars	£300	Not	None	Not	None	All	Stranded Partial.	in Penarth Roads, after being in collision at different times with three vessels. Sustained very much damage. The last collision and stranding attributed to the incompetency of a pilot.	Dep. 445 Wr. 447
	-	-	-	-	-	- - -	Wrecked Total.	off Penarth; supposed to have parted from her anchor in Caldy Roads; and running for Burry Port, seen to strike, and immediately go down. Piece of stern, with name and port, washed ashore.	Wr. 1389
ars	£100	Not	Unknown	Unknown	3	- - -	Foundered Total.	in Penarth Roads; seen from the shore suddenly to lurch over, and go down stern foremost with all hands.	Wr. 693 „ 718
ars	Total	£6,000 Trieste.	Nil	Nil	None	- - -	Stranded Total.	on the east mud, Penarth; about to be docked, but too late; was anchored in the mud, and fell over so much as to be unable to righten; at flood tide became a wreck.	Wr. 823
s	Unknown	Unknown	Unknown	Unknown	None	- - -	Struck Partial.	upon an anchor or some substance unknown two miles from Penarth, probably the anchor of the ship. Master said to be lax in his efforts to save the vessel.	Wr. 823
ars	Unknown	Not	Unknown	Not	None	- - -	Stranded Total.	on Penarth Roads. Blew very heavily; tide ebbed; caught on the bank of the cut, and being very sharp turned over and sunk.	Wr. 1996

Return of Vessels in Distress (otherwise than by Collision) in the Bristol Channel, from St.

HOLM ISLANDS AND NORTH SIDE OF CHANNEL.

Date of Casualty.	Name of Vessel. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind. Direction.	Wind. Force.	Weather.	Hour and Time of Tide.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
(15) 1856. Feb. 9	Superb, of Barnstaple	Smack	38	2	Barnstaple to ——	Ballast	Calm.	0	Hazy	8 20 P.M.
(33) April 10	Jane, of Camaes	Sloop	26	3	Barrow to Neath	Iron	W.S.W.	6	Thick fog	9 30 A.M.

SOUTH SIDE OF CHANNEL.

Date of Casualty.	Name of Vessel. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind. Direction.	Wind. Force.	Weather.	Hour and Time of Tide.
(30) May 7	Brothers, of Lydney	Trow	60	3	Newport to Bristol	Coals	E.N.E.	10	Clear	7 30
(101) 1857. Jan. 3	Jeannette, of Copenhagen	Barque	238	13	Bristol to Lisbon	Wheat	W. by S.	12	Squally	6 25 P.M.
(17) 1856. Feb. 9	Sabrina, of Cork	S. S.	314	21	Bristol to Cork	General, and Passengers.	S.W.	9	Coarse	9 24 A.M.
(149) 1857. May 4	Packet, of Minehead	Smack	39	4	Minehead to London	Flour, &c.	E.N.E.	7	Squally	12 noon
(98) Jan. 2	James Yeo, of Prince Edward Island.	Ship	1,081	23	Prince Edward Island to Bristol.	Timber	Calm	Calm	6 P.M.	6 P.M.
(144) April 14	Mary Ann Peters, of Bristol	Barge	445	20	Bristol to Africa	General	S.W.	2	Cloudy	10 41 A.M.
(50) 1856. July 10	Success, of Liverpool	Brigantine	67	2	Tralee to Cardiff	Ballast	W.N.W.	9	Squally; fine.	10 30 A.M.

ILFRACOMBE TO HARTLAND POINT.

Date of Casualty.	Name of Vessel. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind. Direction.	Wind. Force.	Weather.	Hour and Time of Tide.
(187) 1857. Dec. 29	Shakespeare, of London	Barge	612	22	Newport to St. Thomas	Coals	W.S.W.	5	Clear	8 P.M.
(20) 1856. Feb. 20	Albatross, of Norway	Brig	317	11	Cardiff to Malta	Coals	E	5	Clear	0 30 P.M. Low water.
(120) 1857. Jan. 22	Splash, of Bideford	Sloop	30	3	Porthcawle to Bideford	Coals	E.S.E.	1	Fine	3 A.M.
(39) 1856. May 11	George Brown, of Kinsale	Schooner	88	5	Kinsale to Cardiff	Sheep	W.	4	Thick	8 P.M.
(176) 1857. Oct. 8	Warden, of Boston, U.S.	Barge	406	11	Newport to Cuba	Iron	W.N.W.	10	Thick rain	4 A.M.
(21) 1856. Feb. 26	Sovereign, of Gloucester	Smack	25	2	Port Leven	Ballast	W.	6	Hazy	5 30 A.M.
(157) 1857. July 9	Cawton, of Scarborough	Brig	238	10	Demerara to Bideford	Timber	N.W.	5	Fine	12 noon
(47) 1856. June 15	Emily, of Bridgewater	Smack	67	4	Bridgewater to Devonport	Timber	N.N.W.	6	Squally	—
(44) „ 6	Mary, of Barnstaple	Smack	35	3	Newport to Mouthmill	Coals	N.E.	5	Clear	High water

d to the Land's End, including the Scilly Islands, during the Years 1856 and 1857—*continued.*

el's Age and classed yd's List.	Vessel.		Cargo.		Lives lost.	Number of Lives saved, and by what Means.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage.	Site and Cause of Casualty. — Remarks.	Authority.
	Estimated Loss on.	Insured for, and where.	Estimated Loss on.	Insured for, and where.					
13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
								HOLM ISLANDS AND NORTH SIDE OF CHANNEL.	
ls classed.	£50	Not	-	-	None	-	Stranded Partial.	on N.W. part of Flat Holm, through vessel becoming unmanageable. Strong current drifted her off. She was derelict about 8 hours, and subsequently recovered by master and crew.	Wr. 415 Dep. 618
-	Total	Unknown	Total	Unknown	None	-	Wrecked Total.	on the Hedges Rock. Through the extreme thickness of the weather the land could not be seen; and having struck on sunken rock was run ashore. She went to pieces; total loss.	Wr. 1142
								SOUTH SIDE OF CHANNEL.	
wn	Unknown	Unknown	Unknown	Unknown	1	2, by the "Jenny Jones" S. S.	Foundered Total.	in the Bristol Channel, between Portishead and Fort Point. Sprung a leak in the bad weather.	Wr. 1327
s	Unknown	Unknown	Unknown	Unknown	None	-	Stranded Partial.	on Pill, near Portishead. Parted from both anchors, and chains and windlass carried away. Ran for King Road to avoid sinking. Got off and discharged for repairs.	Wr. 48
s	£150	Not	Nil	Unknown	None	-	Stranded Unknown.	on Nelson's Point, east side River Avon, caused by want of beacons to show the course of the river when the land at mouth is overflowed.	Wr. 786
s	£50	Not	£50	Not	None	-	Leaky Partial.	in River Avon, opposite Pill; anchored in river too late previous tide. Sheered ashore; when she floated, drove foul of her anchor, the stock of which went through her bottom, and caused her to sink. Recovered and taken to Bristol.	Wr. 1372
-	£150	Unknown	Nil	Unknown	None	-	Damaged Partial.	by fire at Bristol, supposed to have originated through a lighted pipe or lucifer matches which were left in a bed-berth.	Wr. 252 " 371
d 13 years ew.	Unknown	£2,000	Unknown	£11,000	None	-	Stranded Pardal.	at Rounham Ferry Slip, Bristol; left at high water and grounded; the tide falling, it was impossible to get her off until next springs; got off and into dock for repairs after discharging cargo.	Wr. 1177
rs	£300	Not	Nil	Nil	None	-	Stranded Total.	at back of the Island of Beam Dock, Weston-super-Mare. Sails reported to be very bad, and the weather very boisterous; spars and rigging saved. Vessel holed, and supposed to have become a wreck.	Wr. 1539
								ILFRACOMBE TO HARTLAND POINT.	
s k Dipth.	£100	Lloyd's	Nil	Nil	None	-	Leaky Partial.	east of Ilfracombe, and seriously damaged; having heavy cargo on board; and ship having been much neglected in caulking, &c. while under repair.	Wr. 2631
-	-	Norway	Unknown	Unknown	None	-	Stranded Partial.	eastward of the Mort Stone in Rockham Bay, Bristol Channel; got off leaky, and towed into Bristol to discharge and repair; said to be negligence of pilot.	Wr. 668
-	£600	Not	£25	Not	None	-	Stranded Total.	on Wharfhouse Point, Barnstaple; soon after pilot left wind died away, and as the anchor was not ready to be let go, she drifted on the rocks and became a wreck.	Wr. 574 " 540
s	-	Unknown	Unknown	Unknown	None	-	Stranded Unknown.	on Braunton Sands, Devon. The weather foggy; and only one cast of the lead taken. Ship in a bad position.	Wr. 1305
-	Unknown	Unknown	Unknown	Unknown	7	-	Stranded Total.	north end of Braunton Sands; mistook Hartland Point for Baggy Point. Got on the rocks, and went to pieces.	Wr. 2044 " 2034
wn	Unknown	Not	-	-	None	-	Stranded Partial.	near the entrance of Appledore Harbour, caused by not steering a proper course.	Wr. 718
a	Unknown	Scarborough	Nil	Unknown	None	-	Capsized Total.	near Appledore. Pilot moored her on the edge of the bank of the river, and the sand washing away she fell over on her beam ends, and fills as the tide flows.	Wr. 1569
s	£100	Topsham	Unknown	Unknown	None	-	Derelict Total.	Found abandoned and water-logged 10 miles S.W. of Trevoise Head. Struck by heavy sea while wearing, which started a butt and caused her to fill fast; crew abandoned her. Towed into Appledore by Brig Charlotte, which was awarded £120 for the service.	Dep. 1444 Wr. 1455
rs	£120	Nil	None	Nil	None	2, by boats	Wrecked Total.	W. of Mouth Mill, near Clovelly. Anchor breaking while warping off, with wind on shore. Total loss.	Wr. 1425

Return of Vessels in Distress (otherwise than by Collision) in the **Bristol Channel**, from St.

Date of Casualty.	Name of Vessel. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind.		Weather.	Hour and Time of Tide.
							Direction.	Force.		
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1857. (147) April 20	Elizabeth, of Padstow -	Brig -	165	7	Newport to Padstow -	Coals -	S.S.W.	9	Squally -	Midnight -
(139) Mar. 23	Sarah, of St. Ives - -	Schooner	125	6	Neath to Hayle - -	Coals -	N.E.	9	Squally, snow and sleet.	1 30 A.M. -

LUNDY ISLAND.

Date of Casualty.	Name of Vessel. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind Direction.	Wind Force.	Weather.	Hour and Time of Tide.
1856. (35) April 21	Choice, of Bideford -	Schooner	137	7	Newport to Portsmouth -	Coals -	Variable	1	Clear -	3 A.M. -
(48) June 16	Albert Edward, of Jersey -	Smack -	21	3	Vivier to Jersey - -	Cyder -	S.S.W.	6	Moderate	- - -
(74) Oct. 2	Fleta, of Shoreham - -	Brig -	188	9	Pembrey to London -	Coals -	S.W.	7	Clear -	1 P.M. -
(78) " 21	Victoria, of Hartlepool -	Barque -	225	8	Swansea to Havre - -	Coals -	S.S.E.	5	Clear -	9 P.M. -
(85) Dec. 2	Wanderer, of Padstow -	Schooner	55	4	Hayle to Llanelly - -	Copper ore	S.W.	9	Thick -	3 A.M. -
1857. (154) July 4	Rocket of Truro - -	Schooner	91	6	Truro to Llanelly - -	Copper ore	N.W.	9	Stormy -	2 P.M. -
(158) July 18	Louis Charles - -	Lugger -	70	6	Cardiff to Bordeaux -	Coals -	S.W.	3	Fine -	6 A.M. -
(162) Aug. 14	Troubadour, of Sunderland	Brig -	48	9	Cardiff to Athens - -	Coals -	N.E.	5	Hazy -	9 P.M. - -
(168) Sept. 17	Australia, of Wiscassett -	Brig -	122	7	Newport to ——— - -	Coals -	S.E.	6	Thick -	- - -
(169) " 19	G.W. Hall, of Providence -	Barque -	355	11	Newport to N. Carolina -	Iron -	S.W.	8	Heavy -	- - -
(173) Oct. 7	Alarm, of Southampton -	Schooner	168	7	Newport - - -	Coals -	S.S.E.	7	Hazy -	10 30 P.M. -
(182) Nov. 4	Frederick, of Dublin -	Smack -	50	4	Destination unknown -	Coals -	N.	8	Thick, with rain.	1 P.M. - -
(163) Aug. 14	Commodore, of Jersey -	Cutter -	59	6	Swansea to Havre - -	Coals -	N.N.E.	3	Fine -	1 A.M. - -
1856. (59) Sept. 12	Bessie, of Padstow - -	Smack -	43	4	Newport to Padstow -	Coals -	N. by E.	7	Squally -	2 P.M. - -

PADSTOW.

Date of Casualty.	Name of Vessel. — Port of Registry (if known).	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind Direction.	Wind Force.	Weather.	Hour and Time of Tide.
(49) July 8	Fordmill, of Sunderland -	Brig -	223	8	Valencia to Cardiff -	Ballast -	N.N.W.	11	Rough -	8 30 A.M. -
(54) July 25	Demetrius, of Exeter -	Brigantine	129	7	Newport to Dieppe - -	Iron -	N.N.W.	5	Fine -	9 A.M. -
1857. (111) Jan. 11	Alpha, of Jersey - -	Schooner	70	5	Unknown - - -	Flour -	W.N.W.	11	Thick and hazy.	10 30 A.M. -
(123) Jan. 27	Royal Adelaide, of London -	Steam ship	427	21	Cadiz to Cardiff - -	Ballast -	N.E. by E.	7	Clear -	9 P.M. -
(124) Jan. 29	Bottereaux Castle, of Padstow.	Smack -	100	3	Falmouth to Swansea -	Ballast -	E.N.E.	7	Dark and snowy.	3 A.M. - -
(134) Mar. 14	Haberdine, of Teignmouth -	Schooner	53	4	Neath to Teignmouth -	Coals -	W.N.W.	11	Squally -	9 30 A.M. -

o the Land's End, including the Scilly Islands, during the Years 1856 and 1857—*continued.*

Age ssed s List.	Vessel. Estimated Loss on. 14.	Vessel. Insured for, and where. 15.	Cargo. Estimated Loss on. 16.	Cargo. Insured for, and where. 17.	Lives lost. 18.	Number of Lives saved, and by what Means. 19.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage. 20.	Site and Cause of Casualty. Remarks. 21.	Authority. 22.
-	Unknown	Unknown	Unknown	Unknown	None	7, by own boat	Foundered Total.	5 miles from Clovelly; weather very bad; put back to Bideford; sprung a leak, and finding her in a sinking state, left her, when she sunk. Master might have beached her, and prevented it.	Wr. 1251
- -	£1,300	St. Ives	£60	Not	None	- - - -	Wrecked Total.	on Faddacoat Cliff; blowing hard; should have stood outside Lundy Island and hove the lead; vessel broke up, and became total wreck.	Wr. 1012 " 1056

LUNDY ISLAND.

- -	£1,810	Topsham	£150	Unknown	None	7, in the ship's boat	Foundered Total.	N.W. of Lundy Island 5 miles, having sprung a leak.	Wr. 1213 " 1225
-	£40	No	Unknown	Not	None	- - - -	Stranded Partial.	on the E. side of Lundy Island. Missed stays and went ashore near the landing place; planking on bottom much chafed.	Wr. 1450
- -	Unknown	£1,000 London and Topsham.	None	Unknown	None	- - - -	Dismasted Partial.	30 miles W. of Lundy Island. Bowsprit carried away, and foremast head sprung, struck by heavy squall.	Wr. 1986
-	Unknown	£2,000 Hartlepool.	None	Unknown	None	- - - -	Leaky Partial.	off Lundy Island. Ship straining in a heavy head sea, and sprung a leak.	Wr. 2240
- -	Unknown	£300 Topsham.	None	Unknown	None	- - - -	Dismasted Partial.	&c. off Lundy Island; bulwarks carried away and strained. Struck by a heavy sea.	Wr. 2753
-	Unknown	£600	Unknown	Unknown	None	- - - -	Dismasted Partial.	10 miles W. of Lundy. Lost foremast, main-topmast, sails, &c.; and making water, put into Llanelly to discharge.	Wr. 1550
-	Unknown	Unknown	Unknown	Unknown	None	- - - -	Foundered Total.	off Lundy Island 10 miles; sprung a leak, which could not be overcome by the pumps, and sunk.	Wr. 1649
- - ears.	Unknown	Yes	None	Yes	None	- - - -	Leaky Partial.	20 miles W. of Lundy Island, and seriously damaged, caused by the caulking being loose.	Wr. 1829.
- -	Unknown	Unknown	Unknown	Unknown	None	- - - -	Leaky Partial.	off Lundy Island. Strong gale springing up, sprung a leak, which increasing rapidly, put into Cork to discharge and repair.	Wr. 1874.
- -	Unknown	Unknown	Unknown	Unknown	None	- - - -	Leaky Partial.	off Lundy Island. Mainmast and gear all injured by rolling in heavy cross sea. Put into Cork to discharge and repair.	Wr. 1878.
- - d.	£40	£1,000. Topsham.	None	Unknown	None	- - - -	Damaged Partial.	30 miles S.W. Lundy Island. Bulwarks and every thing on deck blown away; sails destroyed, and other damage. Put into Milford to repair.	Wr. 2189.
-	Unknown	Unknown	Unknown	Unknown	-	- - - -	Abandoned Total.	Found at anchor off Lundy, abandoned by her crew. Got off by the master and crew of the "Ranger," and taken into Clovelly in a sinking state.	Wr. 2,233.
- -	Unknown	£400 Jersey.	Unknown	Unknown	None	- - - -	Dismasted Partial.	off Lundy Island N.N.E. 6 miles; strong and sudden squalls broke the mast. Proceeded to Appledore to repair.	Wr. 1730. " 1740.
-	£900	£125 Padstow.	£40	Not	None	- - - -	Capsized Total.	3 miles from Hartland Point; carrying too much sail; and ship being crank, she filled and capsized, and was then abandoned.	Wr. 1943 " 1917

PADSTOW.

-	£300	£1,600 Sunderland.	Nil	Nil	None	- - - -	Stranded Partial.	at entrance to Padstow Harbour. Caught by the eddy winds in running for the harbour, and driven on rocks, losing rudder and getting on the bar owing to the warp breaking.	Wr. 1536
- - ars.	£150	£800 Topsham and Exmouth.	£50	Unknown	None	- - - -	Stranded Partial.	on the bar at entrance of Padstow. Sprung a leak at sea, and in getting into Padstow struck on the bar. Want of a pilot. Towed into Padstow to discharge and repair.	Wr. 1738
-	Unknown	Unknown	Unknown	Unknown	5	- - - -	Stranded Total.	in Trevethick Bay, Padstow; let go an anchor, and was so long letting go the second one, that she drove ashore, and went to pieces; crew got into the boat, which capsized, and all were drowned.	Wr. 366 " 459 " 549
- -	Unknown	London	Nil	Nil	None	- - - -	Stranded Partial.	on the bar at entrance to Padstow Harbour; not being able to get a pilot, missed the channel, caught on the bar, straining very much.	Wr. 597
-	Unknown	Not	Nil	Nil	None	- - - -	Stranded Partial.	in Padstow Harbour, brought up in the harbour with one anchor; ground being bad for holding, and second anchor not ready, went on the rocks, and knocked away keel and bilge pieces.	Wr. 664
-	£500	£500 Western Clubs and Lloyd's.	£40	Unknown	None	4, by life-boat	Stranded Total.	at entrance to Padstow Harbour; ran for shelter in harbour in heavy gale and sea, and no pilot being at hand, and no assistance given, vessel drove on the rocks and became a wreck.	Wr. 891 " 892

Return of Vessels in Distress (otherwise than by Collision) in the Bristol Channel, from St.

Date of Casualty.	Name of Vessel. — Port of Registry (if known.)	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind.		Weather.	Hour and Time of Tide.
							Direction.	Force.		
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1857. (135) Mar. 14	La Desirée, of Auray	Schooner	122	8	Cardiff to Nantes	Coals	N.W.	11	Squally	9 A.M.
(177) Oct. 8	Fancy, of Weymouth	Schooner	78	5	Neath to Southampton	Coals	N.N.W.	6	Squally	6

TREVOSE HEAD.

Date of Casualty.	Name of Vessel. — Port of Registry (if known.)	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind Direction.	Wind Force.	Weather.	Hour and Time of Tide.
1856. (4) Jan. 10	Louisa, of Bangor	Schooner	104	7	Par to Liverpool	Clay	E.	7	Clear	10 P.M.
(30) Mar. 29	Seostris, of Skein	Ship	600	18	Cardiff to Barcelona	Coals	E.	6	Breeze	
1857. (110) Jan. 11	Ann, of Jersey	Smack	90	4	Unknown	Coals	W.N.W.	11	Thick and hazy.	10 30 A.M.
(112) „ 11	Johanna, of Hayle	Schooner	133	8	Llanelly to Hayle	Coals	W.N.W.	11	Hazy	7 15 A.M.
(186) Dec. 14	Lord Porchester, of Padstow	Smack	28	2	Swansea	Copper ore	S.S.W.	4	Clear	Midnight

TREVOSE HEAD TO ST. IVES.

Date of Casualty.	Name of Vessel. — Port of Registry (if known.)	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind Direction.	Wind Force.	Weather.	Hour and Time of Tide.
(184) Nov. 5	Morton, of St. Ives	Schooner	99	6	Swansea to Portreath	Coals	N.N.E.	2	Cloudy	6 30 P.M.
(180) „ 18	Mary Welsh, of St. Ives	Brig	116	6	Cardiff to Hayle	Coals	E.N.E.	6	Thick, heavy squalls.	12 midnight

ST. IVES.

Date of Casualty.	Name of Vessel. — Port of Registry (if known.)	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind Direction.	Wind Force.	Weather.	Hour and Time of Tide.
1856. (3) Jan. 10	Union, of St. Ives	Brigantine	84	5	Pembray to St. Ives	Coals	E.N.E.	8	Squally	¼ ebb
(12) Feb. 8	L'Union, of St. Brienne	Brig	84	7	Swansea to Marseilles	Coals	E.S.E.	6	Rain	4 A.M.
(25) Mar. 12	Desdemona, of New Orleans	Ship	656	20	Havre to Cardiff	Ballast	E.S.E.	9	Hazy	4 30 A.M.
(27) „ 23	L'Ernest, of La Hogue	Brigantine	85	6	Llanelly to Regenville	Coals	S.E.	6	Hazy	5 30 P.M.
1857. (166) Aug. 25	Bruce, of Newcastle	Brig	306	16	Swansea to London	Fuel	S.W. by S.	0	Clear	2 A.M.
(179) Nov. 7	Union, of Portsmouth	Schooner	50	5	Swansea to Seville	Coals	S.E.	10	Fine	7 P.M.
1856. (7) Jan. 18	Guillaume, of St. Servan	Brig	191	8	Havana to Havre	Sugar	W.	12	Rain	

LAND'S END.

Date of Casualty.	Name of Vessel. — Port of Registry (if known.)	Rig.	Tons.	Men.	From. — Bound to.	Cargo.	Wind Direction.	Wind Force.	Weather.	Hour and Time of Tide.
(29) Mar. 28	Hermes, of S. Shields	Brig	268	9	Cardiff to London	Coals	E.S.E.	5	Hazy	8 P.M.
(31) „ 30	William, of Bideford	Schooner	64	4	Newport to Plymouth	Coals	S.E.	5	Fine	4 30 P.M. Low water.

to the Land's End, including the Scilly Islands, during the Years 1856 and 1857—*continued.*

Age l ssed s List.	Vessel. Estimated Loss on. 14.	Vessel. Insured for, and where, 15.	Cargo. Estimated Loss on. 16.	Cargo. Insured for, and where. 17.	Lives lost. 18.	Number of Lives saved, and by what Means. 19.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage. 20.	Site and Cause of Casualty. Remarks. 21.	Authority. 22.
-	£2,000	£1,000 Paris, Brest.	£100	Unknown	1	- - -	Wrecked Total.	at entrance to Padstow Harbour; let go the anchor, which drifted; let go best bower; vessel still dragged and got into breakers, where it was knocked to atoms; one man washed overboard.	Wr. 890 „ 908
-	Unknown	£60	Unknown	Unknown	one	- - - -	Struck on anchor. Total.	at entrance of Padstow Harbour. Getting under weigh to fall in with the breeze, she slewed round; let go anchor, which went through her bottom, and she sunk. Should have laid out a warp.	Wr. 2045 „ 2080

TREVOSE HEAD.

Age	14.	15.	16.	17.	18.	19.	20.	21.	22.
-	£400	Bangor	Unknown	Unknown	None	All	Dismasted Partial.	in heavy gale off Trevose Head, and all rigging, bowsprit, and gear carried. Much damaged.	Wr. 175 „ 308
- -	Unknown	Norway	Unknown	Unknown	None	- - - -	Leaky Partial.	Trevose Light, bearing S.S.E. 10 miles, by stress of weather. Put into Queenstown to discharge and repair.	Wr. 983
-	Unknown	Unknown	Unknown	Unknown	4	- - - -	Abandoned Total.	near Trevose Head; boarded by coast-guard who found her anchor chain out, and the anchor broken and boat gone; took her into Padstow derelict.	Wr. 459 „ 365 „ 514
onths	£2,000	Not	£80	Not	None	- - - -	Stranded Total.	in Ives Bay, near Tervose Head; a storm from the W.N.W.: not able to keep off a lee shore, run into the bay; let go two anchors, which dragged, and she came on shore, and became a wreck.	Wr. 378
-	£140	Unknown	Unknown	Unknown	None	2, by a fisherman	Foundered Total.	18 miles S.S.W. of Trevose Head, having suddenly sprung a leak, which could not be kept free.	

TREVOSE HEAD TO ST. IVES.

Age	14.	15.	16.	17.	18.	19.	20.	21.	22.
- -	£1,100	£600 Lloyd's. £300. St. Ives.	£80	Not	None	- - - -	Wrecked Total.	at entrance of Portreath Harbour; struck on a rock, and lost her rudder; light winds with heavy ground swell, mistook the light in a shop for harbour light.	Wr. 2377 „ 2365
- -	£1,200	St. Ives. £700	£100	Unknown	6	- - - -	Stranded Total.	off Godrevy Rocks, on the inner stones; masts above water, and all hands perished.	Wr. 242

ST. IVES.

Age	14.	15.	16.	17.	18.	19.	20.	21.	22.
- -	Unknown	£500 London.	None	Not	None	Stayed by vessel	Stranded Partial.	on the Bar in St. Ives Bay; much strained and damaged. Run on bar when tide was more than ¼ ebb; got off. Pilot said to be in error.	Dep. 160 Wr. 232
-	£280	£400 France.	None	France	None	- - - -	Wrecked Total.	on St. Ives pier, heavy ground sea parted stern chains, and threw her on beach, and, being very old, was soon broken up.	Wr. 914
-	Unknown	United States	Nil	Nil	None	- - - -	Stranded Partial.	on the outer stones in St. Ives Bay; got off. Severe gale spring up; got a leak of 2 feet per hour. Put into St. Ives to repair damages. Might have been avoided if light on Godrevy.	Dep. & Wr. 873 „ 870
-	Unknown	France	Unknown	Unknown	None	- - - -	Stranded Partial.	off the stones in St. Ives Bay, for want of marks to point out position of rocks, which are covered at high water, wind being S.E. over the land and water smooth. Much damaged.	Wr. 935 „ 939
-	Unknown	London	Unknown	Unknown	None	- - - -	Leaky Partial.	off St. Ives Head; could not keep it under, and being in a sinking state, ran her upon the ground at the entrance of the harbour; started stern frame and strained decks.	Wr. 1783
-	Unknown	£600	Unknown	Unknown	None	- - - -	Abandoned Total.	in St. Ives Bay. Could not fetch St. Ives Bay. Vessel laboured, and pumps kept going, found a leak, which kept gaining until the crew resolved to abandon her. Found by the pilot boat at Hayle.	Wr. 2164 „ 2167
-	Unknown	France	Unknown	France	2	- - - -	Dismasted Partial.	and severely damaged in lat. 42° N., long. 36° 28′ W.; put into St. Ives to discharge and repair.	Wr. 438 Dep. 845

LAND'S END.

Age	14.	15.	16.	17.	18.	19.	20.	21.	22.
-	Unknown	Unknown	Unknown	Unknown	6	3, by a schooner	Wrecked Total.	on Kettles Bottom, near Land's End, mistaking the position of the rock; crew got into boat; ship heeled over and entangled it in rigging, and 6 of them were drowned.	Dep. & Wr. 956 Wr. 978
- -	£550	Lloyd's	£47	Unknown	None	4, by own boat	Stranded Total.	on Peel Point, Land's End. Hugging the shore; the wind failed, and tide drove her on rocks, and afterwards sunk in deep water. Total loss.	Wr. 973 „ 981

Return of Vessels in Distress (otherwise than by Collision) in the BRISTOL CHANNEL, from

Date of Casualty. 1.	Name of Vessel. — Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. — Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.
1856. (43) May 31	Kingston, of Sunderland	Barque	279	10	Sunderland to Constantinople	Coals	S.E. by S.	6	Hazy	6 30
(46) June 14	Brothers, of Brixham	Schooner	113	4	Llanelly to Portsmouth	Coals	W.N.W.	7	Squally	4 P.M.
(57) Aug. 21	Elizabeth, of Bideford	Brig	59	5	Port Talbot to Plymouth	Coals	N.N.W.	10	Hazy	4 P.M.
1857. (137) Feb. 6	Jane, of Truro	Schooner	56	4	Newport to Truro	Coals	N.E.	7	Squally	11 P.M.
(136) Mar. 20	Truro, of Truro	Schooner	90	6	Cardiff to London	Iron	S.W.	9	Stormy	11 P.M.
(152) June 24	Maas, of Rotterdam	S.S.	168	12	Cardiff to Rotterdam	General	Calm	0	Thick fog	10 30 A.M.
(153) „ 26	Margaret, of Plymouth	Schooner	92	5	Neath to Plymouth	Culm	S.E.	4	Fine	0 30 P.M.
(159) July 25	Brian Boru, of Liverpool	Schooner	75	4	Charlestown to Glasgow	Clay	S.S.W.	9	Thick	Flood 2 A.M.
(160) Aug. 1	Ithuriel, of Teignmouth	Brigantine	145	6	Glasgow to Rouen	Pig iron	N.N.W.	5	Fine	5 P.M.
(164) „ 17	Hero, of Falmouth	Schooner	66	4	Plymouth to Hayle	Lime	N.E.	3	Foggy	8 30 P.M.
1856. (81) Oct. 30	Sir W. Curtis, of Yarmouth	Schooner	44	4	Yarmouth to St. Ives	Wheat	S.	8	Thick	6 P.M.

SEA.

Date of Casualty.	Name of Vessel.	Rig.	Tons.	Men.	From. Bound to.	Cargo.	Direction.	Force.	Weather.	Hour and Time of Tide.
(41) May 17	Brisk, of Brixham	Schooner	91	6	Llanelly to Havre	Coals	W.N.W.	6	Squally	- -
1857. (142) April 1	Hedvig, of Bremen	Barge	277	12	Newport to St. Thomas	Coals	S.W.	1	Clear	10 30 A.M.
(143) „ 10	Gem, of Cardiff	Brig	181	8	Cardiff to Smyrna	Iron	W.N.W.	10	Bad	- -
(146) „ 19	Clifton, of New York	Ship	667	17	Newport to New York	Iron	S.	11	Bad	- -
(183) Nov. 5	Florence Dombey, of Liverpool.	Brig	142	7	Newport to Santander	Iron	S.S.W.	7	Clear	12 30 P.M.
(133) Mar. 14	Atlantic, of Sweden	Ship	617	19	Cardiff to San Francisco	Coals	S.W.	11	Squally	11 P.M.

SCILLY ISLANDS.

Date of Casualty.	Name of Vessel.	Rig.	Tons.	Men.	From. Bound to.	Cargo.	Direction.	Force.	Weather.	Hour and Time of Tide.
1856. (33) April 5	Casket, of Alloa	Brig	196	8	Jamaica to London	General	Variable	8	Stormy	- -
(34) „ 20	Sovinto, of Lillisand	Ship	415	15	Greenock to Stettin	Iron	E.	10	Stormy	- -
(35) July 31	Superior, of Falmouth	Schooner	88	5	Falmouth to Swansea	Ballast	N.N.E.	2	Foggy	6 30 A.M.

ad to the Land's End, including the Scilly Islands, during the Years 1856 and 1857—*continued.*

ssel's Age and w classed loyd's List. 13.	Vessel.		Cargo.		Lives lost. 18.	Number of Lives saved, and by what Means. 19.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage. 20.	Site and Cause of Casualty. —— Remarks. 21.	Authority. 22.
	Estimated Loss on. 14.	Insured for, and where. 15.	Estimated Loss on. 16.	Insured for, and where. 17.					
ars	£2,800	£2,800 Topsham, London, Whitby.	£200	Unknown	None	10, by Mount's Bay pilot boat.	Foundered Total.	24 miles S.W. of Land's End. Sprung a leak, which increased against all efforts to overcome, and water overflowed forecastle and cabin decks, left her, when she went down in deep water.	Wr. 1420 „ 1424
ars	£30	Brixham	Nil	Nil	None	- - - -	Stranded Unknown	off the Land's End in squally weather, carrying a press of sail to round the Land's End.	Wr. 1445
ars	£350	- -	£60	-	Nil	5, by a schooner	Abandoned Total.	25 miles S.S.W. of the Land's End, having sprung a leak. Crew landed at Falmouth.	Wr. 1762
ars ot.	£250	Not	£50	Not	None	4, by Steam-ship "James Brown."	Abandoned Partial.	3½ leagues S. off Land's End, having sprung a leak, lost sails, and otherwise damaged by stress of weather.	Wr. 714 „ 702
-	£90	Not	Nil	Unknown	None	- - - -	Stranded Partial.	on the Longships, 7 miles from Land's End; struck by a sea which carried away masts and sails, and gave her 4 strakes list, so that she became leaky; put into Truro for repairs.	Wr. 966
rs	Unknown	Unknown	Unknown	Unknown	None	24, crew and passengers, by ship's boats.	Stranded Total.	on Greet Point, between Cape Cornwall and Gurnard's Head; vessel going at full speed in a thick fog, and no lead hove.	Wr. 1484 „ 1494
ars	£500	Not	£45	Not	None	5, by their own boat	Stranded Total.	on Peal Point, Land's End; making too free with the point, struck on sunken rock and became a wreck.	Wr. 1490
ars d*.	Unknown	Bangor	Unknown	Unknown	None	- - - -	Dismasted Partial.	off the Longships by a sudden squall, by which masts were completely carried away, and sea breaking over her, cut away the wreck, and were assisted into Pembroke for repairs.	Wr. 1697
onths l. 7 years.	£100	Topsham. £1,400	Unknown	Unknown	None	- - - -	Dismasted Partial.	4 miles from Cape Cornwall. Ship rolling in heavy sea, carried fore-top-mast, top-gallant-mast, split sails, and much injured the vessel. Put into Hayle for repairs.	Wr. 1696
own t.	Unknown	Not	Unknown	Not	None	- - - -	Stranded Total.	1 mile S. of Cape Cornwall. Saw Longship Light, but took no bearings, and did not know the draft of water of his vessel. Struck on the rocks, and abandoned by crew. Vessel recovered by C.G.	Wr. 1755 „ 1757 „ 1765
rs	Unknown	Yes	Unknown	£1,570 Exchange.	None	- - - -	Stranded Total.	at Hugh Ferry. Going up to the quay took the ground, strained and filled; and on being removed at low water, fell over from port to starboard, and sustained considerable damage.	Wr. 2306

SEA.

13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
-	£45	Brixham	Unknown	Unknown	None	- - - -	Dismasted Partial.	in Bristol Channel. On starboard tack, beating down under single-reefed topsails, when the foremast head went, carrying with it the fore and main topmast and jib-boom.	Wr. 1366
ars	Unknown	£2,000 Bremen.	None	Unknown	None	- - - -	Leaky Partial.	in Bristol Channel; tried the pumps; found leak increasing; put back to Newport to discharge and repair.	Wr. 1158
own	Unknown	Unknown	Unknown	Unknown	None	- - - -	Leaky Partial.	in Bristol Channel; obliged to carry sail to keep ship off the land; she laboured heavily, and made much water; ran for Padstow to discharge and repair.	Wr. 1365
own	Unknown	New York	Unknown	Unknown	None	- - - -	Leaky Partial.	in Bristol Channel, through bad weather; bore up for Cork to discharge and repair.	Wr. 1362
s	£300	£500	Unknown	Unknown	None	- - - -	Leaky Partial.	in Bristol Channel; when a moderate gale sprung up, and ship became very leaky. Not being able to reduce it, put back to Milford.	Wr. 2348
	£500	Unknown	Nil	Unknown	None	- - - -	Dismasted Partial.	56 miles N.N.E. off Old Head, of Kinsale, in a heavy squall; masts went overboard and quantity of rigging; bore up for Bristol for repairs.	Wr. 862.

SCILLY ISLANDS.

13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
rs	Unknown	Unknown	Unknown	Unknown	None	- - - -	Dismasted Partial.	and otherwise damaged off Scilly by a succession of gales. Sails all split or blown away, and ship very seriously damaged. Put into Scilly to discharge and repair	Wr. 1261 „ 1262
own	Unknown	Unknown	Unknown	Unknown	None	- - - -	Leaky Partial.	off Scilly by stress of weather, aggravated by the nature of the cargo. Being a fir-built vessel, was too weak to carry a cargo of iron and bricks without straining. Cargo discharged.	Wr. 1262
rs	£150	£700 Topsam.	-	-	None	- - - -	Stranded Unknown.	East part, Island St. Mary's, Scilly, in consequence of dense fog then prevailing; had made St. Agnes Light before fog came on, and did not heave the lead afterwards.	Wr. 1750 „ 1767

Return of Vessels in Distress (otherwise than by Collision) in the BRISTOL CHANNEL, from St. D

Date of Casualty. 1.	Name of Vessel. — Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. — Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.	[illegible]
1856. (58) Aug. 28	Custos, of Liverpool - -	Barque -	273	17	Liverpool to River Bonny -	General -	W.S.W.	4	Moderate and hazy.	1 A.M. - - High water.	C.C. -
1857. (119) Jan. 20	Emma, of Dublin - -	Brig -	163	9	Dublin to Cadiz - -	Indian corn	W.S.W.	10	Cloudy -	2 A.M. -	[illegible]
(137) Mar. 21	Velox, of Cardigan -	Schooner	46	4	Swansea to Dordrecht -	Iron -	E.S.E.	9	Cloudy -	2 30 P.M. -	C.C.
(151) June 1	Voluna, of Padstow -	Brig -	336	12	Falmouth to Quebec -	Ballast -	S.	4	Thick - (Very.)	12 30 A.M. -	C.C.

SEA.

Date of Casualty. 1.	Name of Vessel. — Port of Registry (if known). 2.	Rig. 3.	Tons. 4.	Men. 5.	From. — Bound to. 6.	Cargo. 7.	Wind. Direction. 8.	Wind. Force. 9.	Weather. 10.	Hour and Time of Tide. 11.	[illegible]
(170) Sept. 21	Elspeth, of London -	Barque -	282	13	Newcastle to Martinique -	Coals -	E.	6	Clear -	- - -	[illegible]
1856. (5) Jan. 12	Lionesse, of Scilly - -	Schooner	71	5	Mazagan to Cork - -	Grain -	E. by S.	8	Cloudy -	7 30 A.M. -	[illegible]
1857. (118) Jan. 19	Frederick, of Dublin - -	Barque -	370	13	Cardiff to Marseilles -	Coals -	N.W.	10	Bad -	- - -	[illegible]
(97) Jan. 1	Dunaskin, of Ayr - -	S.S. -	122	12	Lisbon to Bristol - -	Oranges -	W.S.W.	6	Thick -	10 45 P.M. -	C.C.
1856. (19) Feb. 19	Flag of Truce, of Newcastle	Barque -	417	15	London to Madras - -	General -	- -	- -	- -	- - -	- -

ad to the Land's End, including the Scilly Islands, during the Years 1856 and 1857—*continued.*

ssel's Age and w classed loyd's List. 13.	Vessel.		Cargo.		Lives lost. 18.	Number of Lives saved, and by what Means. 19.	Nature of Casualty, and whether occasioning Total Loss or only partial Damage. 20.	Site and Cause of Casualty. — Remarks. 21.	Authority. 22.
	Estimated Loss on. 14.	Insured for, and where. 15.	Estimated Loss on. 16.	Insured for, and where. 17.					
urs	Unknown	Unknown	Unknown	Unknown	None	-	Wrecked Total.	on the Crim Rocks, W. of Scilly Rocks; thick weather; master thought he was more to the westward; could not take observation and did not heave the lead.	Wr. 1794 „ 1796 „ 1824
ars	Unknown	Unknown	Unknown	Unknown	None	-	Dismasted Partial.	off St. Agnes Light, Scilly; blowing strong with heavy head sea, which struck her and threw her on her beam ends; put into Scilly to discharge and repair.	Wr. 624
-	Unknown	Unknown	Unknown	Unknown	3	1, by "Garland," pilot cutter.	Wrecked Total.	on Shipman Head, Scilly Isles; missed stays, and drove on the rocks; bilged, filled, and went down; crew got into boat which capsized, and 3 were drowned.	Wr. 967 „ 1043
ars	Unknown	Unknown	Unknown	Unknown	None	12, in own boats	Stranded Total.	on St. Agnes, Scilly Islands; very thick weather; master set course which would have carried him 6 miles clear of the islands, but for the northerly set of tide. Lead not hove; vessel refused stays.	Wr. 1438

SEA.

rs	Total	Unknown	Total	Unknown	None	-	Foundered Total.	40 miles S.S.E. of Scilly. Sprung a leak under the breast-hooks; water gaining rapidly, and pumps choked, abandoned her, when she went down.	Wr. 1908
ars yd's A 1.	£100	Lloyd's, £500 Topsham, £200.	Unknown	Unknown	None	All	Leaky Partial.	and much damaged by stress of weather, in lat. 45° 24′, long. 11° 47′; put into Scilly to repair and refit.	Wr. 276
ars l.	Unknown	Unknown	Unknown	Unknown	None	-	Disabled Partial.	50 miles from the Smalls; lost her rudder in a heavy sea, and put into Scilly to repair.	Wr. 548
rs	Unknown	Unknown	Unknown	Unknown	2	-	Stranded Total.	on the outer rock of Guthen Buss, near Tol Peden, Penrith. Made Scilly lights, and lost sight of them. Weather thick. Made another light, which took to be Seven Stones, and soon after struck on a sunken rock and went to pieces. Lead hove.	Wr. 24 „ 30
-	-	-	-	-	1	-	Leaky Partial.	and in great distress from severity of weather at sea.	Dep. 724 Wr. 920

VESSELS in DISTRESS on the EAST COAST OF ENGLAND, between

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Cargo. 11.	Exact Spot where Casualty happened. 12.
SEA.											
(22) **Margaret** Schooner—72—5. (10 years.)	Berwick	Grangemouth	1856. 5 Feb.	-	-	-	-	Coal Port	Ballast	-	E. Coast
FARN ISLANDS.											
(29) Friendship Schooner—65—4. (Age unknown.)	Sunderland	Newcastle	-	-	-	-	-	Aberdeen	-	Iron.	Off Farn Islands.
(86) Elizabeth Brig—189—9. (2 years.)	Liverpool	Riga	-	-	-	-	-	Belfast	-	Timber	Off the Farn Islands.
(105) Flying Dutchman Brig—166—8. (Age unknown.)	Dundee	Shields	25 Dec.	-	Stormy	N.W. 4	Ebb	Dundee	-	Coals	Close to the Big Farn Island.
(162) Jason Brig—164—6. (38 years.)	Lynn	Lynn	1857. 19 Dec.	Noon	Bad	S.E.	Near high water.	Hartlepool	Ballast	-	3 miles S. of Farn Islands
(167) Dalkeith Schooner—87—5. (Age unknown.)	Inverness	Sunderland	3 Jan.	9 A.M.	Moderate	S.S.E. 12.	½ ebb	Inverness	-	Coals	Farn Islands
(195) Ivanhoe, S.S. S.S.—156—15. (6 years.)	Leith	Rotterdam	16 Feb.	6 A.M.	Moderate	S.S.E.	¼ ebb	Leith	-	General	Scare-crow Bush Rock, S.E. of Big Farn
BAMBOROUGH TO AMBLE.											
(125) Harmonie Barque—210—13. (14 years.)	-	Liverpool	27 Dec.	11 A.M.	-	N., moderate.	-	Shields	-	Salt	2 miles N. of Bamborough Castle.
(144) Wards Brig—188—8. (10 years.)	Blyth	Havre	25 Dec.	1 P.M.	-	S.W. 5	Flood	Blyth	Ballast	-	Budle Sands, near Bamborough.
(43) Epsilon Brig—210—8. (Age unknown.	Blyth	Shields	2 Jan.	10 P.M.	-	S., light	Flood	France	-	Coals	1 mile S. of Dunstanborough Castle.
(203) Resolution Sloop—47—3. (70 years.)	Sunderland	Kirkaldy	-	-	Unknown	-	-	Sunderland	-	Iron	Steel Rocks, 1 mile from Boulmer.
(251) Velocity Brig—288—8. (8 years.)	Sunderland	Hamburgh	14 Oct.	8 A.M.	Fine	Variable S.	Last ¼ ebb	Sunderland	Ballast	-	N. of Boulmer Bridge.
(72) Thomas Brig—145—7. (28 years.)	Newcastle	Brake	-	Unknown	Unknown	Unknown	Unknown	Amble	Ballast	-	N. pier of Warkworth Harbour.
AMBLE.											
(134) Gulturus Brig—333—11. (9 years.)	Sunderland	Hull	1857. 2 Jan.	10 A.M.	Moderate	S.	Unknown	Shields	Ballast	-	Rocks, near Pier.
(152) Sophia Brig—204—12. (Age unknown.)	Oporto	Newcastle	3 Jan.	3 A.M.	-	-	-	Oporto	-	Coals	Hudson Scar
(171) Georgiana Schooner—80—4. (2 years.)	Inverness	Inverness	30 Dec.	-	Showery	W. strong	High water	London	-	Potatoes	Near Pier
(182) Jane Brig—135—6. (33 years.)	Berwick	Shields	-	-	-	-	-	London	-	Coals	West Rocks
(190) Hope Sloop—45—3. (Age unknown.)	Sunderland	Sunderland	1 Feb.	6 P.M.	Fine	S.W. by S.	High water	Aberdeen	-	Coals	¼ mile S. of Hudson Scar.
(194) Brunette Schooner—70—5. (Age unknown.)	Ramsay	Hartlepool	10 Feb.	4 P.M.	-	S.W.	Unknown	Fraserburgh	-	Coals	Off
(201) Krydeseren Schooner—128—8. (Age unknown.)	Tonsberg	Tonsberg	-	-	-	-	-	Shields	-	Timber	Beach
HAUXLEY TO NEWBIGGEN.											
(64) British Dominion, steam tug. 27—3. (Age unknown.)	Shields	Shields	1856. -	-	[Light wind	at W.	½ ebb	Hauxley	-	Herrings	Hauxley Harbour, on a rock 500 yards from high-water mark.
(57) Newport Schooner—73—5. (19 years.)	Montrose	Sunderland	18 July	2 A.M.	Fine	S.W. 4	¾ flood	Montrose	-	Coals	Bondicar Bush, S. of Coquet Island.

ISLANDS and FLAMBOROUGH HEAD, in 1856 and 1857.

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18.	Lives lost. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	State any Particulars that can throw light on the Cause of the Casualty. 22.	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23.
SEA.								
- - -	N.W. 12	- - -	Foundered; total -	5	Stress of weather; left Berwick, and never heard of since 6th.	No - - -	Vessel being in ballast, supposed to have been upset by strong gales.	No.
FARN ISLANDS.								
- - -	- -	- - -	Abandoned; total -	Nil.	Leak, which could not be reduced.	—	—	—
Snow and hail	N. 9	- - -	Leaky; partial -	Nil.	Stress of weather; sprung a leak.	No; but driven out of her course.	- - - -	Bore up for the Humber to discharge and repair.
Snow - -	N.E. 12	Flood - -	Foundered; total -	8	Bad weather; rode down at her anchor off N. Sunderland.	Yes; as far as Berwick North.	Ship making water, and no place of safety within reach.	Yes. Had there been a harbour of refuge under Coquet Island, she would have been able to reach it.
Snow - -	E. 10	Low water -	Stranded; total -	Nil. £800.	Stress of weather, driven ashore.	No - -	Bad weather - -	—
Snow - -	E.S.E. 9.	High water -	Lost sails, &c. -	Nil. £100.	Stress of weather, lost storm sails, and bulwarks.	- - -	Violence of wind -	No; driven before wind in N.W. direction from off Farn Islands to Berwick; master thinks Hartlepool most convenient harbour of refuge.
Thick - -	S.E. 1	Last ebb -	Stranded; got off -	Nil. £3,000.	Thick weather - -	No - -	Compass incorrect -	—
BAMBOROUGH TO AMBLE.								
Snow - -	E. 9	½ ebb - -	Stranded; total -	1 £2,500.	Parted anchors; drove ashore.	—	—	—
Snow - -	E. by N. 10.	High water -	Stranded; got off -	Nil. £500.	Heavy sea; parted anchors.	No - -	Severe gale and heavy sea.	Yes; Shields.
Thick - -	E. 9	¼ ebb - -	Foundered; total -	8 £1,400.	Seen to capsize in violent gale.	Yes; not known how far.	Severe gale and heavy sea.	Yes; Shields.
Fine - -	W. 8	¼ ebb - -	Stranded - -	Nil.	Gale; hugged shore too close.	No - - -	Keeping too close to shore.	No.
Thick - -	S.S.W. 4.	1 hour ebb -	Stranded; got off -	Nil.	Stood in for land, thick weather, no lead hove.	No; but driven out of her course 40 miles N. of destination.	Strong S.S.W. and hazy weather, drove her ashore.	No.
Dark - -	N.N.E. Moderate.	¼ ebb - -	Stranded; total -	Nil.	Captain mistaking lights	- - -	Owing to captain improperly running for the harbour at night without pilot.	No.
AMBLE.								
Sleet - -	E.S.E. 11.	- - -	Stranded; got off -	Nil. £3,000.	Stress of weather -	No; but driven past her port, and wrecked at Amble.	Driven on lee shore -	Yes; Shields.
Snow - -	E. 10	½ flood -	Stranded; total -	Nil.	Dragged anchors in gale	—	—	—
Sleet - -	E. by S. 12.	1 hour flood -	Stranded; total loss -	Nil. £1,300.	Stress of weather, lost sails, became unmanageable.	Yes; to Souter Point.	Sudden change of wind -	Yes; Shields.
Hazy - -	S.W. by S. 11	- - -	Stranded; got off -	Nil.	Thick weather - -	No.	—	—
Hazy - -	S. 3	½ ebb - -	Stranded; total -	Nil.	Not heaving lead in thick weather.	No.	—	—
Fog - -	S.S.W. 4	- - -	Stranded; got off -	Nil. £140.	Heavy sea unshipped rudder; drove ashore.	—	—	—
Thick -	S.S.E. 10	- - -	Stranded - -	Nil.	Gale; thick weather.	—	—	—
HAUXLEY TO NEWBIGGEN.								
Very hazy -	S.S.W. 2	High water -	Struck on rocks; total	Nil.	Hazy weather; want of caution.	No - -	Entering her port of destination; unacquainted with the harbour.	No.
Thick -	N.N.W. Moderate.	Low water -	Stranded; got off -	Nil.	Thick weather - -	No - -	Hazy weather; vessel run aground.	No.

Vessels in Distress on the East Coast of England, betw

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	 Cargo. 11.	Exact Spo where Casua happened. 12.
(95) Comely - - Schooner—100—5. (Age unknown.)	Inverkeithing	Rotterdam -	1856. 27 Nov.	- -	Snowy -	S.E. 10	- - -	Grangemouth	- -	Loaded	Rocks; New-biggen Pier.
(110) Enterprise - Schooner—106—7. (Age unknown.)	Lynn - -	Newcastle -	- -	- -	- - -	- -	- - -	Lynn - -	- -	Coals	Newbigg .
(265) Jaffer Elligonda Galliott—83—5. (20 years.)	Pekela -	Newcastle -	- -	- -	- - -	- -	- - -	Rotterdam -	- -	Coals	Newbiggi

BLYTH.

Name of Ship.	Port of Registry.	Port sailed from.	Date of sailing.	Hour of sailing.	Weather.	Wind.	Tide Stream.	Port bound to.	Ballast.	Cargo.	Exact Spot.
(2) Sarah - - Schooner—82—5. (31 years.)	Ipswich -	Ipswich -	1856. 10 Dec.	9 A.M.	- - -	- -	- - -	Seaham -	Ballast	- -	Bar . .
(4) Deux Sœurs - Lug—90—6. (15 years.)	St. Valerie -	Blyth - -	9 Jan.	- -	Hazy, heavy sea	N.E. 7	High water -	Bayonne -	- -	Coals	Sand Pier, W. Sea.
(148) Gretina - Schooner—70—4. (Age unknown.)	Foreign -	Dysart -	1857. 2 Jan.	- -	- - -	- -	- - -	Bremen -	- -	Coals	Sands . .
(243) Camolla - - Sloop—47—4. (42 years.)	Dundee -	Sunderland -	20 Aug.	2 A.M.	Clear - -	W.N.W. 5.	2 or 2½ knots	Dundee -	- -	Coals	10 miles S.E. of

SEA.

Name of Ship.	Port of Registry.	Port sailed from.	Date of sailing.	Hour of sailing.	Weather.	Wind.	Tide Stream.	Port bound to.	Ballast.	Cargo.	Exact Spot.
(179) Ariel - - Brig—280—11. (18 years.)	Whitby -	Memel -	- -	- -	- - -	- -	- - -	London -	- -	Wood	Sea . .
(15) Teresa - - Brig—182—7. (20 years.)	Sunderland -	Sunderland -	1856. 5 Feb.	5 P.M.	Fine - -	Moderate breeze W.	High water -	London -	- -	Coals	30 miles E: Tynemouth Light.
(225) Expedit - Brig—200—8. (Age unknown.)	- -	- - -	- -	- -	- - -	- -	- - -	- - -	- -	Timber	Picked up miles off Tynemouth.
(24) Sultan - - Brig—249—11. (19 years.)	Shields -	Folkestone -	- -	- -	- - -	- -	- - -	Shields -	Ballast	- -	Off Shields

SHIELDS.

Name of Ship.	Port of Registry.	Port sailed from.	Date of sailing.	Hour of sailing.	Weather.	Wind.	Tide Stream.	Port bound to.	Ballast.	Cargo.	Exact Spot.
(156) Reform - Schooner—90—5. (Age unknown.)	Swansea -	Swansea -	1857. 24 Dec.	5 P.M.	Clear - -	N.W. 5	Full tide -	Newcastle -	- -	Iron	½ mile to Cullercoats Pier.
(199) Lisbon - - Barque—471—13 (Age unknown.)	N. Shields -	Carthagena -	- -	-	- - -	- -	- - -	Shields -	Ballast	- -	Rocks of Cullercoats.
(33) Louise - - Brig—103—7. (5 years.)	Dieppe -	Newcastle -	- -	- -	- - -	- -	- - -	Dieppe -	- -	Coals	Newcastle
(173) Stour - Schooner—81—5. (19 years.)	Colchester -	Colchester -	1 Jan.	7 A. .	Fair - -	S.W. Moderate.	Ebb - -	Shields -	Ballast	- -	Tynemouth
(25) Matilda - - Brig—79—4. (38 years.)	Lowestoft -	Grimsby -	1856. 5 Feb.	4 P.M.	Fine - -	W.S.W. 5.	Nearly high water.	Shields -	- -	Salt	Upper buoy, S. Shields.
(30) Jane - - Brigantine—169—8. (14 years.)	Maldon -	London -	11 Feb.	8 A.M.	S.W.; fine -	Breeze	¼ flood -	Shields -	Ballast	- -	Herd Sand
(40) Quayside - Brig—234—10. (Age unknown.)	Newcastle -	Janon -	24 Mar.	- -	- - -	- -	- - -	Sunderland -	- -	Coals	Bar .
(53) Spring - - Barque—231—8. (Age unknown.)	N. Shields -	London -	4 July	- -	- - -	- -	Last quarter ebb.	Shields -	Ballast	- -	Rocks of
(71) Nymph - - Sloop—59—4. (Age unknown.)	Arbroath -	London -	- -	- -	- - -	- -	- - -	Arbroath -	- -	Lime	Harbour
(87) Albion - - Brig—266—10. (30 years.)	Newcastle -	Dundee -	29 Nov.	- -	- - -	- -	- - -	Shields -	Ballast	- -	Herd Sand

slands and Flamborough Head, in 1856 and 1857—*continued.*

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18.	Lives lost. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	State any Particulars that can throw light on the Cause of the Casualty. 22.	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23.
Hazy	W.S.W. 5.	Unknown	Stranded; got off	Nil.	Fog; no lead hove	No	Thick weather	No.
Sleet	E. 10	Low water	Stranded; total	7	Drifted; struck and went to pieces.	—	—	—
Hazy	S.W. 6	- - -	Stranded; total	Nil. £400.	Sprung a leak in bad weather. Run ashore to save life.	—	—	—

BLYTH.

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18.	Lives lost. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	State any Particulars that can throw light on the Cause of the Casualty. 22.	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23.
Stormy	S.S.E. 10	¾ flood to southward.	Stranded; got off	Nil.	In running into Blyth for shelter struck by sea. Struck ground and lost rudder. Drove on Sow and Pigs Reef near the breakwater.	No; but driven N. of her port.	Gale caught her off Scarborough. Struck on the bar and became unmanageable, the rudder being unshipped.	Yes; at any place between Scarborough and Blyth would have prevented the accident.
Hazy, heavy sea	N.E. 7	High water	Stranded; got off	Nil.	Whilst towing out of harbour took a sheer to W. and caught the ground.	No.	—	—
Snow	E. 10.	- - -	Stranded; got off	Nil.	Gale dead in shore.	—	—	—
Thick	N.N.E. 5.	Spring	Foundered; total	Nil. £325.	Stress of weather	No	Sprung a leak at midnight, and sank 3 hours after.	No.

SEA.

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18.	Lives lost. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	State any Particulars that can throw light on the Cause of the Casualty. 22.	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23.
- -	- -	- - -	Capsized; total	11 £1,800	Supposed to have capsized in a gale; found bottom up, and towed to the Tyne.	- - -	- - - -	No.
Stormy	S.W. 10	¼ flood in shore.	Foundered; total	Nil.	Bad weather, seas carrying away stanchions and covering boards, pumps could not keep the leak under.	Yes; got as far to the S. as Hartlepool, and was driven back to about 3 miles E. of Tynemouth Light.	Stress of weather, and being struck by several seas.	Perhaps Sunderland.
- -	E.S.E. 6.	- - -	Abandoned; total.	—	—	—	—	—
- -	W.S.W. 9.	- - -	Abandoned; total	Nil.	Heavy gale.	—	—	—

SHIELDS.

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18.	Lives lost. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	State any Particulars that can throw light on the Cause of the Casualty. 22.	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23.
Snow	E.N.E. 9.	Near springs	Foundered; total	5 £200.	Stress of weather	No.	—	—
Fog	Calm. 0	High water	Stranded; got off	Nil. £200.	Thick weather	No	Drunkenness of the master.	Yes; Shields.
Fine	- -	- - -	Explosion	Nil.	Gas generated from coal under hatches.	No.	- - - -	No.
Snow	E. by N. 10.	High water	Stranded	Nil.	Tiller disabled by sea, drifted on rocks.	No	Sea broke on board, and drove in stern of vessel.	Yes; at Redcar.
Cloudy; heavy rains.	S.S.W. to W. 12.	¼ flood	Stranded; got off	Nil.	Driven from moorings by gale.	No	Breaking adrift from moorings, with some hundred, during a hurricane.	No.
Clear	S.W. 4	⅛ flood	Stranded; got off	Nil.	Pilot taking bar too soon.	No	When vessel struck, unshipped her rudder, and she became unmanageable.	No.
- -	N.E.	- - -	Stranded	Nil.	Became leaky, and stranded on bar when putting back.	—	—	—
Stormy	N.E. 12	Nearly high water.	Stranded; got off	Nil.	Heavy gale from N.E.; ran ashore to save her.	No	At anchor off her port, waiting tide, when gale of wind and high sea from N.E. drove her into shoal water, where she slipped and ran for beach.	Yes. An improved state of entrance to Shields harbour would probably have prevented the occurrence.
Moderate	S.E.	- - -	Cargo heated; scuttled to save her; partial.	Nil.	Cargo getting wet.	No.	—	—
now	W. 5	⅜ flood	Struck; partial	Nil.	Took the bar too far to south, and did not let out anchor in time to save her.	—	—	—

Vessels in Distress on the East Coast of England,

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Cargo. 11.	Exact Spot where Casualty happened. 12.
(88) Fire Fly S.S.—404—15. (2 years.)	London	London	1856. 29 Nov.	2 A.M.	Not known	Notknown	Ebb	Shields	Ballast	-	2 miles S.E. of Sunderland; towed by 2 tugs towards Shields, but sunk the Narrows off Shields.
(84) Brothers Brig—92—5. (Age unknown.)	Aberdeen	Sunderland	21 Nov.	-	Strong gale	E. wind, withSnow	-	Aberdeen	-	Coals	Herd Sand
(80) Pekin Barque—504—17. (15 years.)	Newcastle	Newcastle	15 Nov.	-	Squally	N.N.E.	Flood	Carthegena	-	Coke	Herd Sand
(99) Earl Talbot Brig—176—7. (16 years.)	Shields	London	8 Dec.	-	-	-	-	Shields	Ballast	-	Rocks [illegible] Spanish Battery, mouth of the Tyne
(101) Galatea Brig—163—8. (6 years.)	Dartmouth	Rotterdam	-	-	-	-	-	Newcastle	Ballast	-	Herd Sand
(176) Active Brig—168—7. (11 years.)	Whitstable	Whitstable	1857. 1 Jan.	-	Fine	W.S.W.	Low water	Shields	Ballast	-	Herd Sand
(177) Sarah Helen Brig—195—7. (17 years.)	Newcastle	London	2 Jan.	-	-	-	-	Shields	Ballast	-	Herd Sand
(197) Prince Philip Barque—223—10. (7 years.)	Ostend	Shields	-	-	-	-	-	Trieste	-	Coals	[illegible] Drop.
(210) Spring Barque—331—9. (60 years.)	North Shields	Scheidam	-	-	-	E.N.E.; fine.	¼ flood	Shields	Ballast	-	Spanish Battery
(224) Wittus Brig—220—10. (17 years.)	Carlscrona	Newcastle	31 Mar.	-	-	-	-	Venice	-	Coals	S. Shields
(228) Newark Brig—96—5. (Age unknown.)	Hull	London	26 Mar.	-	Unknown	-	-	Newcastle	Ballast	-	Herd Sand
(229) Trio Schooner—44—3. (Age unknown.)	Lynn	Lynn	4 April	3 30 P.M.	Fine; moderate.	S.S.E.	Flood	Newcastle	-	Flour	Herd Sand
(248) Prince of Wales Schooner—63—4. (16 years.)	Port Madoc	Aberdeen	18 Sept.	10 A.M.	Clear	N.N.E. 5.	High water	Shields	Ballast	-	Herd Sand
(249) Lessing Brig—320—12. (Age unknown.)	Rostock	Tyne	-	-	-	-	-	Swinemunde	-	Coals	South Shore
(253) Magna Charta Barque—357—12. (10 years.)	Shields	Shields	21 Oct.	-	Hazy	N.W. 3	-	Brake	-	Coals	Mouth Harbour.
(256) George Fyffe Barque—480—15. (17 years.)	Newcastle	Quebec	-	-	-	-	-	Shields	-	Timber	Herd Sand
58) Tyne Smack—40—3. (7 months.)	Newcastle	Shields	15 Nov.	-	-	-	-	Scarborough	Ballast	-	Herd Sand

SHIELDS TO SUNDERLAND.

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Ballast. 10.	Cargo. 11.	Exact Spot where Casualty happened. 12.
(222) Medina Brig—196—8. (28 years.)	Cowes	Hamburgh	19 Mar.	-	-	S. E. by E.	-	Sunderland	Ballast	-	Marsden rocks
(157) Aurora Sloop—51—4. (3 years.)	Goole	Grimsby	-	-	-	-	-	Newcastle	-	Linseed	Souter Point
(68) Medora Schooner—114—5. (20 years.	Yarmouth	Yarmouth	1856. 22 Sept.	-	-	-	-	Shields	Ballast	-	Whitburn Sands
(255) Burgomeister Schooner—258—8. (Age unknown.)	Orone, Prussia	Dantzic	-	-	-	-	-	Sunderland	-	Timber	Whitburn Sands

SEA.

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Ballast. 10.	Cargo. 11.	Exact Spot where Casualty happened. 12.
(14) Tower Schooner—174—7. (Age unknown.)	Sunderland	Shields	1856. 5 Feb.	2 P.M.	-	W.S.W.; moderate.	¼ flood	Carthagena	-	Coke	Off Sunderland
(16) George Glen Brig—300—11. (Age unknown.)	London	Sunderland	6 Feb.	4 P.M.	Fresh breezes. Hazy.	-	-	London	-	Coals	Between Sunderland and Scarborough.

slands and Flamborough Head, in 1856 and 1857—*continued.*

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18.	Lives lost. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	State any Particulars that can throw light on the Cause of the Casualty. 22.	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23.
Fog	N.W. 7	Low water	Stranded; got off	Nil.	Took the ground in a fog; no lead going.	Not driven back	The coast being covered with snow, &c. concealing land, though clear to seaward, caused her to get aground.	Shields best situate for a refuge harbour.
Snow	N.N.E. 11.	- - -	Stranded; got off	Nil.	No pilot or tug to be got; stranded in heavy gale; stress of weather.	Yes. The owner thinks the vessel was as far as Fern Island.	State of weather entirely.	The vessel in taking the harbour of Shields got aground. Had it been a harbour of easy access, the accident might not have occurred.
Gloomy	N. 5	- - -	Stranded; total	Nil.	Going out, tow rope broke, sail not set.	- - -	- - - -	No.
Clear	S.W. 7	¾ flood	Struck on rocks; got off.	Nil.	Steam tug threw off tow rope too soon; vessel not having enough sail, got ashore.	No	Entering her port of destination, strong wind drove the vessel to leeward, and steam tug letting go rope.	Shields, if any.
Hazy	W.N.W. 8	½ ebb	Stranded; got off	Nil.	Tow rope broke	No.	—	—
Snow	E. by N. 12.	Low water	Stranded	Nil. £800.	Stress of weather	No	Ballast shifted	Yes; Filey.
Snow	E. by N. 12.	Ebb	Stranded	1 £800.	Stress of weather; lost masts, &c.	—	—	—
Fog	5.	- - -	Explosion	1 and 3 injured.	Spontaneous combustion of cargo.	—	—	—
Cloudy	S.E. 6	½ flood	Struck bar; total	Nil. £1,400.	Mistaking lights, taking bar too soon, struck and became wreck.	No	Struck by a sea; rudder broke, and vessel unmanageable.	Yes; Shields.
Rainy	S.E. 5	High water	Foundered; raised	Nil.	Struck on edge of bank while being towed out	—	—	—
Fog	E.S.E. 4.	½ flood	Stranded; got of	Nil.	Whilst being towed in, heavy sea struck her, and tow rope was cast off.	- - -	Steam tug let go tow rope, and she went ashore.	—
Hazy	S.E. 2	High water	Stranded; got off	Nil.	Sea struck her when crossing bar.	No.	Wind dropped near buoy of the Herd; became unmanageable.	No.
Clear	N.N.W. 1.	½ ebb	Stranded; got off	Nil.	Tow rope broke while being towed out.	No.	Heavy sea, on bar, giving way tow rope.	—
- - -	- -	- - -	Explosion	Nil. £553.	Exploded 8 hours after loading.	No.	—	—
Hazy	N.W. 3	High water	Stranded; got off	Nil.	Got out of proper channel when leaving the port.	- - -	Would not answer helm.	—
Hazy	N.E. 5	½ hour of High water.	Stranded	Nil. £400.	Got to southward by mismanagement of pilot; wind drove her on sand.	—	—	—
Fine	E.N.E. 5	Low water	Stranded; total	Nil.	Breaking of tow rope.	—	—	—

SHIELDS TO SUNDERLAND.

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18.	Lives lost. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	State any Particulars that can throw light on the Cause of the Casualty. 22.	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23.
Bad	E. 10	High water	Stranded; total	Nil. £1,300.	Bad weather.	—	—	—
Stormy	E.N.E. 11.	- - -	Stranded	4 £200.	Stress of weather.	—	—	—
Hazy	W. 3	¾ flood	Stranded; got off	Nil.	Hazy weather; lead not hove.	No	None; but through carelessness of the master.	No.
Hazy	N.E. 5	- - -	Stranded	Nil.	Carelessness of pilot.	—	—	—

SEA.

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18.	Lives lost. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	State any Particulars that can throw light on the Cause of the Casualty. 22.	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23.
Stormy	W. by N. 11.	About low water.	Leaky; partial	Nil.	Struck by a sea, which caused her to leak.	Yes; driven as far N. as the Coquet Island, not having at any time prevous reached farther S. than Sunderland.	The vessel was struck by the seas, and rendered leaky.	Yes; Sunderland.
Violent westerly gale.	S.W. 10	- - -	Foundered; total	Nil.	Caught in a gale; abandoned in a sinking state.	No	Driven 60 miles off coast day of sailing; thrown on her beam ends and foundered.	No.

Vessels in Distress on the East Coast of England, between

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Cargo. 11.	Exact Spot where Casualty happened. 12.
(21) Harry King - Brig—115—8. (20 years.)	Hastings -	Rye - -	1856. 4 Feb.	- -	Fine - -	W.N.W.	Flood -	Hartlepool -	Ballast	- -	20 miles E. of Sunderland.
(77) Liberty - Brig—233—9. (70 years.)	Sunderland -	Sunderland -	13 Nov.	3 P.M.	Fine - -	N.W.; strong.	High water –	Hamburgh –	- -	Coals	60 miles S.E. by E. of Sunderland.
(107) Blossom - Schooner—51—4. (15 years.)	Perth -	Shields -	1857. 2 Jan	9 A.M.	Stormy -	W.S.W.; fresh. 5.	2⅛ to 3 knots	Perth -	- –	Coals	7 miles E. of Sunderland Point.
(184) Friends - Schooner—67—4. (Age unknown.)	Dundee -	Dundee -	- -	- -	- - -	- -	- - -	London -	- -	Potatoes	Navestone Rock 5 miles E. of Sunderland.

SUNDERLAND.

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Ballast. 10.	Cargo. 11.	Exact Spot where Casualty happened. 12.
(1) Conqueror, steam tug. Schooner—500—15. (15 years.)	Sunderland -	Sunderland -	1856. 3 Jan.	7 20 A.M.	Fine, strong sea	S.S.W. 2	¼ flood -	- - -	Ballast	– -	Polka Hole Harbour.
(3) La Parisienne - Schooner—103—7. (Age unknown.)	Dundalk -	Sunderland -	8 Jan.	– -	Heavy sea -	N.E. 8	- - -	Nantes -	- -	Coals	Bar
(5) Innes - Schooner—81—5. (5 years.)	Arbroath -	Arbroath -	9 Jan.	- -	Variable -	N. to E.	- - -	Sunderland -	Ballast	– –	Bar -
(13) Kingston - Barque—279—8. (Age unknown.)	Sunderland -	Moored in river.	- -	- -	Bad - -	W.N.W. 11.	High water -	- - -	- -	- -	Ravens' Wheel in Wear.
(34) Canada - Brig—260—8. (Age unknown.)	London -	London -	- -	- -	- - -	- -	- - -	Sunderland -	Ballast	- -	Harbour -
(38) Mary - Brig—149—6. (8½ years.)	Whitby -	London -	- -	- -	- - -	- -	- - -	Seaham -	Ballast	- -	S. pier -
(39) James - Brig—191—7. (12 years.)	London -	London -	16 Mar.	Unknown	Unknown -	E.	Ebb - -	Seaham -	Ballast	- -	Bar -
(42) Essex - Brig—180—7. (19 years.)	Sunderland -	Sunderland -	5 April	3 P.M.	Clear and fine	S.S.E.; strong.	A little after high water.	Hamburgh -	- -	Coals	Behind N. harbour.
(43) Harlington - Brig—255—9. (5 years.)	Sunderland -	Sunderland -	5 April	4 P.M.	Clear - -	S.S.E. 6	High water -	Constantinople	- -	Coals	Bar -
(44) William - Coble—20—6. (Age unknown.)	Sunderland -	Sunderland -	- -	- -	- - -	- -	- - -	Vessels in offing.	Ballast	- -	S. dock outlet
(48) Doctor Daniel - Brig—194—8. (15 years.)	Cuxhaven -	Hamburgh -	- -	- -	- - -	- -	- - -	Hartlepool -	Ballast	- -	Rocks between new and old piers.
(70) Magdelena - Sloop—45—5. (7 years.)	Ystadt -	Ystadt -	- -	- -	- - -	- -	- - -	Newcastle -	- -	Wheat	Behind S. pier
(81) Clyde - Brig—158—7. (40 years.)	Sunderland -	Sunderland -	15 Nov.	4 30 P.M.	Clear - -	N.E. 6	High water -	London -	- -	Coals	Behind the S. pier.
(82) Robert and Mary Brig—207—8. (16 years.)	Sunderland -	Sunderland -	15 Nov.	5 P.M.	Fine - -	N.E.; strong breeze.	High water -	London -	- -	Coals	Against S. pier
(85) Nymph - Schooner—87—6. (38 years.)	Teignmouth -	Southampton	3 Nov.	- -	- - -	- -	- - -	Sunderland -	Ballast	- -	Behind S. pier
(100) Ariel - Barque—302—12. (2 years.)	Sunderland -	Sunderland -	13 Dec.	3 25 P.M.	Dull - -	N., strong. 7.	High water -	Bordeaux -	- -	Coals	Bar - -
(138) James Bales - Brig—229—9. (17 years.)	Shields -	Shields -	1857. 2 Jan.	Noon.	Fine - -	W. by N.	High water -	Carthagena -	- -	Coke	Behind pier -

Islands and Flamborough Head in 1856 and 1857—*continued.*

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18.	Lives lost. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	State any Particulars that can throw light on the Cause of the Casualty. 22.	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23.
Cloudy	W.N.W. 6.	- - -	*Abandoned; total	Nil.	Stress of weather	No	Sprung a leak, and shifted ballast.	No.
Squally	E.N.E. 10.	- - -	Leaky and dismasted; partial.	Nil.	Shipping seas, &c., stress of weather.	No	Nothing but the squall	No. Got into Bridlington.
Hazy	W.N.W. 6.	Last ¼ flood	Foundered; total	Nil. £400.	Heavy sea. Sprung a leak, and went down immediately.	No	- - - -	No.
Very thick	W. by N. 7.	High water	Stranded; total	Nil. £800.	Struck on rock in thick weather.	—	—	—

SUNDERLAND.

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18.	Lives lost. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	State any Particulars that can throw light on the Cause of the Casualty. 22.	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23.
Fine, strong sea	S.S.W. 2	¼ flood	Stranded; total	Nil.	Struck on sunken wreck and knocked a hole in her bottom. Towed a little further up the harbour, and became a total wreck from heavy sea.	No	The sunken wreck was buoyed, but had washed away from the buoy about 100 yards.	No.
Heavy sea	N.E.	1 hour ebb	Struck pier; got off	Nil.	Steam tug not powerful enough; cast her off. Fell to leeward and struck the pier. Towed back to moorings by two steam tugs.	No.	—	—
Snow; squally	E.N.E. 9	Half ebb	Stranded; got off	Nil.	Stress of weather. Driven behind S. pier.	No	When taking the harbour of Sunderland a heavy sea struck the vessel; she became unmanageable, took the ground, and was driven behind S. pier.	No; the vessel was bound to Sunderland, and would not have taken another port.
Bad	W.N.W. 11.	High water	Capsized; recovered	Nil.	Heavy gale, broke from her moorings.	No	Took the ground on a bank, and as the tide receded, fell over.	No.
Fine	N.N.W. 4.	High water	Struck on her anchor	Nil.	- - - -	No	- - - -	No.
Cloudy	E.S.E.	High water	Struck pier. Got off	Nil.	Lost steerage way when near Seaham; driven back, and struck on South piers.	No	- - - -	No.
Clear	S.S.E.	- - -	Stranded	Nil.	Struck on Sunderland bar.	Cannot be ascertained.		—
Clear	S.S.E. 6	High water	Struck pier; total	Nil.	Tug unable to tow her for want of power. Heavy sea struck her against pier.	No	- - - -	No.
Clear	S.S.E. 6	High water	Struck bar; got off	Nil.	Being towed out, struck and damaged.	No; but had proceeded as far as off the Tees and returned leaky.	Struck the bar, and returned leaky.	No.
Stormy	S.E. 6	¼ ebb	Swamped; total	1	Struck by heavy sea and went down.	No.	—	—
Squally, thick	E.N.E. 6	High water	Stranded; got off	Nil.	Thick weather; mistook new for old pier.	—	—	—
Boisterous	E. 8	¼ ebb	Struck pier; total	Nil.	In running for the harbour for safety, gaff broke; tide carried vessel out; struck behind S. pier.	—	—	—
Clear	N.E. 6	High water	Struck bar; total	Nil.	Struck bar when being towed out; became leaky; tow rope slipped off steam tug's hook; and in trying to get back into the harbour without use of tug went on shore behind S. pier.	No	Nothing more than already stated.	No.
Clear	N.E. 6	High water	Stranded; got off	Nil.	Squall when leaving port.	No	Struck pier, and in being turned to bring her back she went on the beach.	If Sunderland harbour had been a harbour of refuge, the ship would have sustained no further injury than that arising from striking the pier.
Snow	W.S.W. 7.	Last quarter, ebb.	Stranded; got off	Nil.	Tow rope broke when on the bar.	No	- - - -	No.
Dull	N. 6	High water	Stranded; got off	Nil.	Reef of seas while crossing the bar caused her to strike.	No	Wreck entirely owing to a reef of seas while crossing the bar.	No. Vessel was towed by 2 steam tugs into the southern entrance of the S. dock, and so salved before getting to sea. Question not applicable.
Stormy	E.N.E. 11.	1 hour ebb	Stranded; got off	Nil. £1,200.	Struck pier while making harbour.	Yes; S. of Hartlepool; could not keep off land.	Unmanageable in broken water on bar; drove against pier.	Yes; either Shields or Sunderland.

* This vessel was subsequently picked up derelict, and repaired.

Vessels in Distress on the EAST COAST of ENGLAND, betwee

Name of Ship.	Port of Registry (if British).	Port sailed from.	Date of sailing.	Hour of sailing.	Weather at Time of sailing.	Wind at Time of sailing.	Tide Stream at Time of sailing.	Port bound to.	Whether in Ballast or with Cargo.		Exact Spot where Casualty happened.
									Ballast.	Cargo.	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
(166) Eclipse Schooner—66—4. (40 years.)	Ipswich	Ipswich	1857. 1 Jan.	-	Thick	E. 10	Unknown	Seaham	Ballast	-	Hawthorn Hive
(183) Isabella Schooner—82—4. (18 years.)	Newcastle	St. Osyth	15 Jan.	-	-	-	-	Sunderland	-	Timber	Bar
(185) John and Jane Sloop—59—3. (17 years.)	Goole	Sunderland	24 Jan.	11 A.M.	Fine	N.N.E. 7.	⅛ flood	Harwich	-	Coals	Bar
(196) Ford Brig—210—8. (Age unknown.)	Sunderland	London	12 Feb.	-	Unknown	-	-	Sunderland	Ballast	-	300 yards S. of S. pier.
(205) Hannah Schooner—78—4. (20 years.)	Yarmouth	Arbroath	11 Mar.	-	Unknown	W.S.W.; gale.	Unknown	Sunderland	-	Timber	Behind N. pier
(206) Effort Schooner—129—7. (26 years.)	Southampton	Southampton	16 Mar.	-	Unknown	-	-	Sunderland	Ballast	-	Behind N. pier
(208) Swan Brig—259—8. (18 years.)	Sunderland	Altona	18 Mar.	8 A.M.	Dull	S.E.; strong.	High water	Sunderland	Ballast	-	Behind N. pier
(215) Fancy Barque—290—11. (10 years.)	London	Shields	16 Mar.	-	Moderate	S.S.W.	-	Oran	-	Coals	Bar
(216) Sisters Barque—687—25. (10 years.)	Rotterdam	Rotterdam	-	-	-	-	-	Sunderland	Ballast	-	Behind N. pier
(218) Les Gezusters Barge—687—25. (7 years.)	Rotterdam	Rotterdam	18 Mar.	-	-	S.	-	Sunderland	Ballast	-	Behind N. pier
(220) Neptune Brig—267—11. (46 years.)	Newcastle	Newcastle	-	-	-	-	-	Brest	-	Coals	Bar
(226) Temisconata Brig—113—6. (18 years.)	Lynn	Lynn	1 April	6 or 7 A.M.	Fine; moderate.	W. 3	High water	Seaham	Ballast	-	Near S. pier
(230) Isabella Schooner—82—4. (19 years.)	Newcastle	St. Osyth	29 Mar.	-	-	-	-	Sunderland	-	Timber	Behind S. pier
(231) Catherine Brig—160—7. (27 years.)	Ipswich	Ipswich	-	-	-	-	-	Sunderland	Ballast	-	Bay
(232) Hero Snow—208—8. (20 years.)	Sunderland	Sunderland	15 April	5 15 A.M.	Fine	W.N.W.; fresh.	High water	Bordeaux	-	Coals	Bar
(235) Don Schooner—114—5. (15 years.)	Seaham	London	-	-	-	-	-	Seaham	Ballast	-	Pier Head
(245) Brothers Brig—174—5. (58 years.)	Sunderland	Sunderland	22 Aug.	4 P.M.	Fine	S.E.	4 hours' flood	Harburgh	-	Coals	N. Pier
(260) Heroine Brig—182—6. (17 years.)	Montrose	Sunderland	17 Nov.	3 30 P.M.	Fine	S. by E. 5.	Nearly high water.	Montrose	-	Coals	Bar

SUNDERLAND TO SEAHAM.

Name of Ship.	Port of Registry (if British).	Port sailed from.	Date of sailing.	Hour of sailing.	Weather at Time of sailing.	Wind at Time of sailing.	Tide Stream at Time of sailing.	Port bound to.	Ballast.	Cargo.	Exact Spot where Casualty happened.
(129) Rienzi Brig—188—7. (Age unknown.)	Sunderland	London	2 Jan.	8 or 9 A.M.	Unknown	Unknown	High water	Sunderland	Ballast	-	Abreast of Hendon Mill.
(133) One Brig—211—9. (7 years.)	Sunderland	Colchester	2 Jan.	10 A.M.	Fine	W.N.W.	4 hours' flood	Sunderland	Ballast	-	Ryhope Dene

SEAHAM.

Name of Ship.	Port of Registry (if British).	Port sailed from.	Date of sailing.	Hour of sailing.	Weather at Time of sailing.	Wind at Time of sailing.	Tide Stream at Time of sailing.	Port bound to.	Ballast.	Cargo.	Exact Spot where Casualty happened.
(45) Robert Stride Brig—235—9 (16 years.)	Sunderland	Seaham	1856. 18 April	1 A.M.	Clear	E.N.E. 5	Running S.; high water at 4 A.M.	London	-	Coals	Harbour
(49) Admiral Hood Schooner—155—6. (10 years.)	Lynn	Lynn	6 May	7 30 A.M.	Fine	E.S.E. 5	Flood	Seaham	Ballast	-	Entrance of harbour.
(51) Fair Maid Schooner—107—5. (22 years.)	Dundee	Dundee	26 May	7 A.M.	Thick	S.E. 5	Ebb	Seaham	Ballast	-	S. side of entrance to harbour.
(189) Ocean Queen Brig—198—9. (10 years.)	Blyth	Seaham	-	8 20 P.M.	-	W.N.W.	Flood	London	-	Coals	N. pier, Seaham.

slands and Flamborough Head, in 1856 and 1857—*continued.*

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18.	Lives lost. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	State any Particulars that can throw light on the Cause of the Casualty. 22.	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23.
Thick; snow	E. 10	Last hour ebb	Stranded; got off	Nil.	Disabled by wind and sea; drifted to leeward.	No; but driven N. past her port.	—	—
Cloudy	W.N.W. 9.	- - -	Stranded; got off	Nil.	Pilot taking the bar too soon.	- - -	- - - -	Taken into Bridlington.
Squally	N. 6	¼ flood	Stranded; got off	Nil.	Pilot taking harbour too soon.	No	Leaky in consequence of striking, and wind increasing obliged to put into Bridlington, with assistance.	Taken into Bridlington. If harbour of refuge at Bridlington, could have got in without assistance.
Coarse	N.E. 5.	- - -	Stranded; got off	Nil.	Struck by heavy sea entering harbour; could not wear; ran her ashore to save her.	No	- - - -	If there had been harbour of refuge in Hendon Bay, might have taken it.
Stormy	S.E. by S. 6.	Unknown	Stranded; total	Nil. £600.	Struck on bar; drove behind N. pier and became total loss.	Unknown	Stress of weather	No.
Clear	E.N.E. 5.	High water	Stranded	Nil. £250.	Struck on bar and drove behind the pier.	—	—	—
Clear	S.E. by S.	High water	Stranded; total	Nil. £1,000.	Struck on bar, lost way, and drove behind pier.	No	Striking bar	Yes; Sunderland.
Cloudy	E.N.E. 9.	½ ebb	Stranded; total	Nil.	Stress of weather.	—	—	—
Stormy	E.S.E. 9.	High water	Stranded; total	Nil. £9,000.	Struck bar.	—	—	—
Stormy	E.S.E. 9.	High water	Stranded; total	Nil. £9,000.	Struck on bar and drove behind rocks.	- - -	Running into harbour for shelter without pilot.	—
Squally	E.N.E. 9.	¼ ebb	Stranded; total	Nil. £2,000.	Struck on bar running in leaky.	—	—	—
Thick	E.S.E. 6.	High water, ½ flood.	Stranded; got off	Nil. £200.	Mistook Sunderland Light for Hartlepool Heugh.	No	Past port bound to; mistook buoy on Redcar Rocks for Sunderland Ballast Buoy.	No.
Thick	E.S.E. 6.	High water	Stranded	Nil.	Struck by sea while taking harbour.	—	—	—
Thick fog	5	2 hours from high water.	Stranded	Nil. £400.	Stress of weather; dragged anchor.	—	—	—
Fine	W.N.W. 6.	High water	Stranded; got off	Nil. £350.	Not sufficient water, through sea getting up.	No	Sea getting up, caused a scud on bar; between seas not water enough for ship without striking.	Yes; Hendon Bay.
Cloudy	E.N.E. 6.	- - -	Struck pier	Nil. £50.	—	—	—	—
Fine	S.E. 4	High water	Stranded; got off	Nil.	Stress of weather; struck the pier when running for harbour; disabled.	No	Vessel laboured heavily, rolled masts away, and struck pier.	Yes; Sunderland.
Hazy	E.S.E. 5.	Nearly high water.	Stranded; got off	Nil. £130.	Took ground while being towed out.	- - -	Struck before reaching bar.	No.

SUNDERLAND TO SEAHAM.

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18.	Lives lost. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	State any Particulars that can throw light on the Cause of the Casualty. 22.	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23.
Bad	E.N.E. 10.	High water	Stranded; got off	Nil.	Stress of weather; ballast shifted.	No	Struck by heavy sea	Yes; harbour of refuge at Hendon Bay would have saved her.
Thick	E. 10	¼ flood	Stranded; got off	Nil. £400.	Stress of weather; canted ballast.	No	Gale of wind and heavy sea; could not make Sunderland harbour.	Yes; Redcar or Hartlepool might have been reached.

SEAHAM.

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18.	Lives lost. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	State any Particulars that can throw light on the Cause of the Casualty. 22.	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23.
Cloudy	E.N.E. 5	1 hour before high water	Stranded; got off	Nil.	Tow rope broke	No	Breaking tow rope the only cause. The vessel, when the tow rope broke, had barely cleared the entrance to the harbour; immediately after breaking rope she went on at back of S. pier at S. harbour.	No.
Cloudy	E.N.E. 6	¼ flood	Struck pier; got off	Nil.	When entering harbour, struck by heavy sea, and went to leeward.	No	- - - -	No.
Cloudy	E.N.E. 4	1st quarter ebb	Struck pier; got off	Nil.	When near entrance Wind fell away; heavy swell threw vessel against pier.	No	Falling away of wind and heavy sea.	No.
Fine	N.N.W. 2	Little past high water.	Struck; got off	Nil. £55.	Getting in, the check rope on pier broke.	No	No	No.

Vessels in Distress on the East Coast of England, betw

SEAHAM TO HARTLEPOOL.

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Cargo. 11.	Exact Spot where Casualty happened. 12.
(146) Don Quixote - Brig—209—9. (16 years.)	Bremen -	Bremen -	- -	- -	- - -	- -	- - -	Sunderland -	Ballast	- -	¼ mile S. of Seaham harbour.
(91) Elizabeth and Mary. Schooner—65—4. (32 years.)	Yarmouth -	Yarmouth -	Unknown	Unknown	Unknown -	Unknown	Unknown -	Newcastle -	- -	Wheat	3 miles S. of Seaham.
(92) Favorite - Schooner—134—6. (38 years.)	London -	London -	- -	- -	Fog -	- -	- - -	Seaham -	Ballast	- -	4 miles S. of Seaham harbour.
(130) Emily - - Brig—204—8. (7 years.)	Sunderland -	London -	1857. 2 Jan.	- -	Unknown -	Unknown	- - -	Sunderland -	Ballast	- -	Hawthorn Dean, near Seaham.
(145) Era - - - Brig—192—9. (16 years.)	Rochester -	Rochester -	2 Jan.	7 30	Stormy - -	Gale. 10	Ebb - -	Sunderland -	B all as	- -	Castle Eden -

SEA.

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Cargo. 11.	Exact Spot where Casualty happened. 12.
(61) Arthur Eugenie Schooner—75—5. (New.)	Cherbourg -	Seaham -	- -	- -	- - -	- -	- - -	Cherbourg -	- -	Coals	9 miles from Hartlepool.
(186) Swallow - Brig—184—8 (Age unknown.)	Poole - -	Poole - -	1857. 10 Jan.	- -	Bad - -	E. by S.; gale.	Unknown -	Hartlepool -	Ballast	- -	Hartlepool W. by S. 10 miles.
(246) Harriet - S. S.—401—18. (Age unknown.)	Newcastle -	Middlesbrough	27 Aug.	- -	Fresh - -	N.N.W.	- - -	Stettin -	- -	Iron	56 miles from Hartlepool.
(257) Anna Margaretha. Schooner—50—5. (Age unknown.)	Leith - -	Leith - -	3 Nov.	4 P.M.	Clear - -	W.	- - -	Bordeaux -	- -	Coals	16 miles S.E. of Hartlepool Heugh.
(136) Honor - - Brig—154—7. (53 years.)	Blyth - -	Boulogne -	1 Jan.	11 P.M.	Strong breeze	W.	Flood - -	Blyth - -	Ballast	- -	1½ miles, Hartlepool Heugh.
(137) John Baker - Brig—123—7. (40 years.)	Blyth - -	Calais - -	1 Jan.	Morning tide.	Fine - -	S.W.	Flood - -	Blyth - -	Ballast	- -	Off Hartlepool
(221) Unknown - Galliot; say 100—6 (Age unknown.)	- - -	- - -	- -	- -	- - -	- -	- - -	- - -	-	- -	Off Hartlepool

HARTLEPOOL

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Cargo. 11.	Exact Spot where Casualty happened. 12.
(11) Atalanta - Barque—270—11. (Age unknown.)	Osternssor -	Hartlepool -	1856. 26 Jan.	- -	Moderate -	S.W.	High water -	Sandecrona -	- -	Coals	Pier -
(35) Alfred - - Barque—288—10. (19 years.)	Hamburgh -	Hamburgh -	13 Mar.	- -	Moderate -	E.; fresh breeze.	- - -	Hartlepool -	Ballast	- -	40 yards S.E. of W. Hartlepool Pier
(36) Charles Molloy - Brig—191—10. (12 years.)	London -	London -	- -	- -	- - -	- -	- - -	Hartlepool -	Ballast	- -	Heugh - -
(73) William - Sloop—23—2. (22 years.)	Stockton -	Staithes -	14 Oct.	3 P.M.	- - -	E. 5	¼ flood -	Hartlepool -	Ballast	- -	Rocks S. of new pier, Hartlepool
(103) Osprey - - Steamer—383—24. (1 year.)	Hartlepool -	Hamburgh -	21 Dec.	8 A.M.	Fresh breeze -	W.N.W. 6.	Flood - -	Hartlepool -	- -	General	Harbour -
109) Duke - - Brig—134—6. (15 years.)	Lynn - -	Seaham -	1857. 2 Jan.	- -	Fine - -	W.S.W.	- - -	Lynn - -	- -	Coals	Middleton sands
(112) Union - - Brig—122—8. (57 years.)	Weymouth -	Weymouth -	31 Dec.	4 P.M.	Fine. 5 -	N.W.	Southerly -	Hartlepool -	Ballast	- -	Middleton sands
(116) Zephyrus - Brig—211—8. (11 years.)	Whitby -	London -	1 Jan.	- -	Fine - -	W. to S.; moderate.	Neap tide -	Whitby -	Ballast	- -	Hartlepool W. Dock
(117) Stanley - Brig—208—8. (14 years.)	Whitby -	London -	1 Jan.	- -	- - -	Not known.	- - -	Hartlepool -	Ballast	- -	Middleton Sands

Islands and Flamborough Head, in 1856 and 1857—*continued.*

Weather at Time of Casualty.	Wind at Time of Casualty.	Tide at Time of Casualty.	Nature of Casualty, and whether occasioning total Loss or only partial Damage.	Lives lost.	Circumstances which caused the Casualty.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage?	State any Particulars that can throw light on the Cause of the Casualty.	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel?
15.	16.	17.	18.	19.	20.	21.	22.	23.
SEAHAM TO HARTLEPOOL.								
Snow - -	E. 10	High water -	Stranded; total -	Nil. £1,200.	Stress of weather; split sails; ran for the shore.	—	—	—
Hazy - -	W. 3	½ ebb - -	Stranded; got off -	Nil.	Gale; no lead hove; hazy weather	No - -	None; but through the carelessness of the master in steering.	No.
Hazy - -	W.S.W. 5	Last quarter, ebb.	Stranded; got off -	Nil.	Mistaking a light of lime-kiln at Castle Eden Dean for Hartlepool lights.	- - - -	Mistaking light of lime-kiln for Hartlepool lights.	No. Redcar most fitting as harbour of refuge.
Foul - -	E.N.E. 12.	High water -	Stranded; total -	Nil.	Stress of weather; drove on rocks.	Yes; 8 miles -	Ballast shifted and threw her on broadside.	Yes; ditto.
Snow - -	E. by N. 10.	Flowing - -	Stranded; total	1	Stress of weather; driven from anchors.	No - -	Violence of the storm -	Yes; Whitby.
SEA.								
Showers -	W. 6	- - -	Capsized; total -	Nil.	Capsized by squall -	No.	—	—
Squally -	Variable 10.	High water; 1¼ hour flood.	Disabled; partial -	Nil.	Stress of weather; running into harbour, disabled, struck on bar.	Yes. Reached Hartlepool light bearing W. by N. 10 miles; driven back off Scarborough; wind moderating got to N. of Whitby, and bore up for Bridlington.	Bad weather - -	Yes; Hartlepool.
Clear -	N.N.W. 5.	- - -	Dismasted; partial -	Nil.	Rotten foremast giving way.	- - - -	- - - -	Put into Hartlepool damaged.
Dark -	S.E. 6	¼ flood -	Foundered; total -	Nil.	Sprung a leak, which could not be kept under.	No - -	- - - -	No.
Sleet - -	E.N.E. 10.	2 hours' ebb -	Foundered; total -	7 £1,000.	Thrown by sea on beam ends; seen to go down with all hands.	No - -	Severe gale; heavy sea	Yes; Redcar
Sleet - -	E. by N. 10.	Ebb - -	Foundered; total -	7 £900.	Unknown; supposed to have sunk off Hartlepool.	No - -	- - ditto - -	Yes; Redcar.
Rain - -	E.S.E. 5.	- - -	Foundered; total -	6	Supposed to have foundered, washed up on sands.	—	—	—
HARTLEPOOL.								
Moderate -	S.W.	High water -	Stranded; got off -	Nil.	In going out of the harbour struck the piers.	No - -	- - - -	No.
Cloudy -	S.E. 7	- - -	Stranded; total -	Nil.	When at sea had bad bad weather; was half full of water. When running into Hartlepool ballast shifted and vessel struck.	—	—	—
Cloudy -	S. by E. 4.	- - -	Stranded; total -	Nil.	Lost steerage and struck on rocks.	—	—	—
Hazy - -	S.S.E. 6	¼ ebb - -	Stranded; got off -	Nil.	Lost sight of lights; tide set vessel on shore.	No - -	Hazy weather, accompanied by heavy sea.	Yes. Had there been a refuge harbour in Tees Bay, the vessel would in all probability have been saved.
Strong gale -	N.E. 9	½ flood -	Foundered; recovered	Nil.	Struck the ground, and was thrown against the N. pier; took bar too soon.	No - -	Gale from E.N.E., and vessel obliged to run for the harbour before sufficient water on the bar, struck the ground and sunk, but recovered and repaired.	Yes. Had there been a refuge harbour she could have entered at any state of the tide, and been saved.
Hail -	E.N.E 10.	¼ flood -	Stranded - -	1	Stress of weather; lost sails, &c., and drifted on beach.	—	—	—
Snow - -	E. 10.	4 hours' flood	Stranded; got off -	Nil.	Struck the reef in making harbour, and drifted on sand.	No - -	Could not run vessel; insufficiency of water; let go anchor; chain parted; went on sands.	Yes. Harbour at Filey, Whitby, or Redcar would have saved her.
Snow - -	E.N.E. 10.	2 hours' flood	Struck pier; partial -	Nil. £2,100.	Running for shelter, struck pier, stove bows and foundered.	Driven past Whitby weather bound, reached Hartlepool N.	Shallow water and breakers in Tees Bay deprived vessel of steerage and drove her against pier.	Yes; Whitby.
Sleet - -	E.N.E. 10.	3 hours' flood	Stranded; got off -	Nil.	Running for shelter; disabled by sea; struck pier and drove on sands.	No - -	Trying to take harbour at Hartlepool struck by heavy sea.	Yes; Hartlepool.

Vessels in Distress on the EAST COAST of ENGLAND,

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	 Cargo. 11.	Exact Spot where Casualty happened. 12.
(132) Lady Aberdeen Brig—198—6. (45 years.)	Sunderland	London	1857. 2 Jan.	8.30 A.M.	- -	S. to S.W.	High water	Sunderland	Ballast	- -	Hartlepool Outer Bar.
(142) Nymph Brig—220—8. (Age unknown.)	Shields	London	Unknown	Unknown	- -	- -	- -	Shields	Ballast	- -	Middleton Sands
(154) Mary Schooner—231—7. (15 years.)	Colchester	Colchester	1 Jan.	Unknown	Fair	S.W.; moderate.	Ebb	Sunderland	Ballast	- -	1½ mile N. of Hartlepool Light.
(155) Native Schooner—85—5. (24 years.)	Exeter	Exeter	31 Dec.	Unknown	Unknown	E. 10.	Unknown	Hartlepool	Ballast	- -	Middleton Sands, Hartlepool.
(160) Joven Dolores Barque—214—9. (8 years.)	Melbourne	London	26 Dec.	- -	Thick	W. 5.	Flood, strong	Middlesbrough	Ballast	- -	200 yards W. of Hartlepool Pier.
(161) Agnes Brig—198—8. (Age unknown.)	Lynn	London	2 Jan.	9 A.M.	Fresh	S.	½ flood	Hartlepool	Ballast	- -	Middleton Sands
(16) Pandora Schooner—82—6. (11 years.)	Margate	Margate	2 Jan.	3 P.M.	Fine	W.S.W. 5.	Unknown	Hartlepool	Ballast	- -	W. Dock
(168) Duke Brig 134—6. (15 years.)	Lynn	Seaham	- -	- -	- -	- -	- -	Lynn	- -	Coals	Middleton Sands
(170) George IV. Brig—245—9. (40 years.)	London	London	1 Jan.	- -	Fresh	S.	High water	Shields	Ballast	- -	West Dock
(74) Cathinka Brig—182—8. (21 years.)	Weismar	Antwerp	15 Dec.	- -	- -	- -	- -	Hartlepool	Ballast	- -	Hartlepool
(181) Seven Brig—256—9. (Age unknown.)	Shields	London	2 Jan.	- -	Moderate	W.S.W.	Unknown	S. Shields	Ballast	- -	W. Dock
(187) St. Lawrence Brig—277—10. (37 years.)	Shields	Hull	- -	-	Unknown	- -	- -	Shields	- -	Salt	Heugh
(213) Columbus Brig—183—7. (30 years.)	Seaham	Seaham	16 Mar.	5 P.M.	Clear	S.S.W. 4.	2¼ hours from high water.	London	- -	Coals	Middleton Sands
(214) Cressimus Brig—208—8. (32 years.)	Scarborough	Hartlepool	16 Mar.	- -	- -	S.W.; moderate.	High water	London	- -	Coals	Middleton Sands
(217) Unicorn Schooner—136—7. (1 year.)	Jersey	Sunderland	16 Mar.	- -	Moderate	S.	- -	Jersey	- -	Coals	Bar
(131) Empress Brig—287—10. (16 years.)	Sunderland	London	2 Jan.	- -	Unknown	Moderate S.W.	¼ ebb	Sunderland	Ballast	- -	Long Scar Rocks.
(151) Unknown Schooner—100—6. (Age unknown.)	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	Near the Long Scarr Buoy

TEES.

Name of Ship.	Port of Registry (if British).	Port sailed from.	Date of sailing.	Hour of sailing.	Weather at Time of sailing.	Wind at Time of sailing.	Tide Stream at Time of sailing.	Port bound to.	Ballast.	Cargo.	Exact Spot where Casualty happened.
(47) William and Isabella, Brig—182—7. (16 years.)	Whitby	London	1856. 24 April	4 A.M.	- -	E.S.E.	- -	Hartlepool	Ballast	- -	Sands 1 mile E. of Seaton Carew.
(69) Milton Schooner—94—5. (35 years.)	Yarmouth	Yarmouth	24 Sept.	7 A.M.	- -	S.	- -	Middlesbrough	Ballast	- -	Tees Mouth, 1 mile S. of Seaton Carew
(78) Cairngorm Schooner—95—5. (9 years.)	Dundee	Dundee	13 Nov.	3 P.M.	Moderate	N.N.W. 4.	Ebb	Seaham.	Ballast	- -	1 Mile S. of Seaton Carew
(113) Chance Brig—134—7. (15 years.)	Whitstable	Whitstable	1857. 2 Jan.	- -	Fine	S. & W.	Not in offing at time.	Hartlepool	Ballast	- -	¼ mile S. of Seaton Carew
(149) Jubilee Brig—111—6. (12 years.)	Guernsey	Portsmouth	31 Dec.	- -	- -	W.S.W.; fresh.	- -	Newcastle	Ballast	- -	Seaton Carew.
(165) Hibbert Brig—231—9. (14 years.)	Newcastle	London	1 Jan.	- -	- -	- -	- -	Newcastle	Ballast	- -	¼ mile of S. Seaton Carew

slands and Flamborough Head, in 1856 and 1857—*continued.*

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18.	Lives lost. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	State any Particulars that can throw light on the Cause of the Casualty. 22.	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23.
Sleet - -	E.N.E. 10.	½ flood -	* Foundered; total -	Nil.	Running into Hartlepool disabled, struck on stones.	No - -	Foundation of new pier under water, and nothing to denote same.	Yes: Hartlepool.
Sleet - -	E. 10.	- - -	Stranded; total -	Nil.	Stress of weather; lost steerage way.	—	—	—
Hail - -	E.N.E. 10.	¼ ebb -	Stranded; total -	2 £800.	Stress of weather; canted ballast; lost masts; and drove on shore.	No - -	Sea breaking on deck, shifted ballast.	Yes; Redcar.
Hail, sleet -	E.N.E. 10.	High water -	Stranded; total -	Nil.	Drove ashore and went to pieces in a gale.	No - -	Unmanageable from loss of rudder.	No; owner recommends harbour at Redcar.
Snow - -	E.N.E. 10.	High water -	Stranded; total -	Nil.	Stress of weather, drifted on rocks.	- - -	Severity of the gale, which disabled her and drove her ashore.	Yes; Redcar.
Sleet - -	E.N.E. 10.	5 hours' flood	Stranded; got off -	Nil.	Stress of weather, disabled, drifted, unmanageable.	No - -	- - - -	Yes; Filey.
Sleet - -	E.N.E. 10.	High water -	Struck pier: partial -	Nil.	Making harbour for shelter, struck on rocks at entrance of W. dock.	No - -	Struck on new work of pier.	—
Hail and sleet	E.N.E. 10.	- - -	Stranded - -	1	—	—	—	—
Sleet - -	E.N.E. 10.	- - -	Stranded; got off -	Nil.	In taking the harbour, struck on some stones.	No - - -	Vessel unable to keep sea, obliged to run for tidal harbour.	Heavy gale E. by S. took vessel off Scarborough, and got off Hartlepool Bay on the 4th January. If refuge harbour at Hartlepool Bay, would have been saved.
Snow - -	E. 7	¼ flood -	Stranded; total -	Nil.	Stress of weather; ran ashore to save crew.	—	—	—
Sleet - -	E.N.E. 11.	- - -	Struck; foundered -	Nil. £2,000.	Stress of weather; running in for shelter, struck.	No - -	- - -	Yes; Redcar.
Snow - -	N.E.by N. 8.	Low water -	Stranded; total -	10 £1,850.	Kept too close to land -	No - -	- - - -	Yes; Redcar.
Cloudy - -	E.S.E. 9.	Near high water.	Stranded; got off -	Nil.	Stress of weather; running into Hartlepool for shelter, got on sands.	Yes; Bridlington	Shipped sea; got leaky; ran for harbour of safety; struck Hartlepool bar, and became unmanageable.	Yes; Filey.
Squally -	E.S.E. 9.	High water -	Stranded; total -	Nil. £1,200.	Leaky at sea; struck bar in entering harbour.	Yes; Flamborough Head.	Struck by heavy sea.	Yes; Filey.
Squally -	S.E. 8	- - -	Stranded; total -	Nil.	Getting into Hartlepool disabled, struck on bar.	—	—	—
Squally -	E.N.E. 10.	½ ebb -	Stranded; total -	6 £1,300.	Dismasted in gale; drove ashore.	No.	Nothing known; master drowned.	Yes; might have taken refuge, if there had been harbour between Bridlington and Hartlepool.
Sleet - -	E. 10	- - -	Foundered; total -	6	Struck by sea. Was seen to go on beam ends and founder.	—	—	—

TEES.

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18.	Lives lost. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	State any Particulars that can throw light on the Cause of the Casualty. 22.	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23.
Thick, squally	E.S.E. 7	- - -	Stranded; total -	Nil.	Thick weather - -	No - - -	- - - -	Passed Whitby in the afternoon of the 29th, and the master states he would have taken the harbour had it been accessible.
Thick - -	E.S.E. 6	Flood tide -	Stranded; total -	Nil.	Driven on shore to leeward of 3rd buoy, through a brig getting to windward and taking wind out of sails.	No - - -	None - - - -	No.
Clear - -	E.N.E. 7.	Low water -	Stranded; got off -	Nil.	Driven from anchor in Hartlepool Roads.	No - - -	Stormy weather -	Had there been a harbour of refuge at Coquet Island, this vessel would have been run in there instead of going to Hartlepool Roads.
Hail - -	E. by N. 10.	½ flood -	Stranded; total -	Nil. £600.	Thrown on beam ends, and drifted ashore.	No - - -	In running vessel for port ballast shifted.	Yes; Redcar.
Thick - -	E.N.E. 10.	1/3 flood -	Stranded; total -	Nil. £300.	Disabled; heavy sea; unmanageable.	—	—	—
Squally -	E.N.E. 10.	- - -	Stranded - -	Nil.	Severe gale caused her to leak, pumps useless, got ashore trying to wear.	—	—	—

* This vessel was subsequently picked up derelict, and repaired.

Vessels in Distress on the EAST COAST of ENGLAND, betwe

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Cargo. 11.	Exact Spot where Casualty happened. 12.
(191) **Robert William** Sloop—39—3. (Age unknown.)	**Boston**	**Yarmouth**	1857. 20 Jan.	9 A.M.	**Hazy**	S.S.W. 5.	1½ knot	**Blyth**	-	**Wheat**	Seaton Scar Rocks.
(211) Peamore Schooner—139—6. (16 years.)	Exeter	Rotterdam	18 Mar.	-	Unknown	-	-	Middlesbrough	Ballast	-	Off Seaton Carew.
(266) Hope Schooner—68—4. (7 years.)	Goole	London	15 Dec.	3 30 A.M.	Fine	W.	½ ebb	Newcastle	-	Iron	Seaton Rocks
(32) Croxdale Brig—294—9. (Age unknown.)	Hartlepool	Middlesbrough	1856. 23 Feb.	5½ P.M.	Strong swell	N.E.	High water	Genoa	-	Iron	Tees Bar
(41) Jessy Schooner—220—7. (Age unknown.)	Exeter	Middlesbrough	-	-	Moderate	N.E.	-	Torquay	-	Coals	Stranded in Tees.
(54) Ford Brig—210—8. (25 years.)	Sunderland	Sunderland	7 July	7 P.M.	Fine	W.N.W.; fresh.	High water	London	-	Coals	6 miles off Tees.
(108) Emulous Brig—179—7. (39 years.)	Whitby	W. Hartlepool	1857. 2 Jan.	8 A.M.	Fine; moderate	W. by S.	-	London	-	Coals	Tees
(158) Will. Alexander Brig—191—7. (20 years.)	Hartlepool	Hartlepool	2 Jan.	8 P.M.	Strong breeze	N. 6.	Flood	London	-	Coals	Tees Mouth
(104) Major Schooner—82—6. (8 years.)	Grangemouth	Sunderland	1856. 22 Dec.	6 15 P.M.	Snow gale. 10	W.N.W.	Flood	Dundee	-	Coals	20 miles S. by W. of Stockton.
(178) Hippocampi Brig—154—7. (Age unknown.)	London	Middlesbrough	-	-	-	-	-	Genoa	-	Iron	Middlesbrough

REDCAR.

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Cargo. 11.	Exact Spot where Casualty happened. 12.
(52) Emma Sloop—24—2. (Unknown.)	S. Shields	Whitby	1856. 27 June	9 A.M.	-	W.	-	Middlesbrough	-	Stone	Saltburn
(56) Brothers Coble—7—3. (Age unknown.)	Redcar	Redcar	8 July	12 40 A.M.	-	W.S.W.; light breeze.	¾ ebb	Fishing	-	Fish	Off
(63) Star Steam Tug—20—4. (4 years.)	Stockton	Scarborough	29 Aug.	7 P.M.	Fine	S.W. 2; light.	2 hours' ebb	Middlesbrough	Ballast	-	Rocks
(75) Hendon Brig—203—8. (6 years.)	Sunderland	London	24 Oct.	12 P.M.	Fine 5	E.N.E., Fresh.	1 hour of ebb tide.	Sunderland	-	General	Rocks
(93) Nancy Sloop—37—3. (42 years.)	Scarborough	Scarborough	5 Dec.	11 A.M.	-	W.S.W. 5.	High water	Hartlepool	Ballast	-	Rocks
(94) Augustine Schooner—115—5. (Age unknown.)	Libourne	Dunkirk	-	-	-	-	-	Hartlepool	Ballast	-	Rocks
(97) Betsy Schooner—84—4. (Age unknown.)	Yarmouth	Yarmouth	5 Dec.	Unknown	Unknown	Unknown	Unknown	Middlesbrough	Ballast	-	Rocks
(98) Mary Anne Sloop—44—4. (28 years.)	Woodbridge	Woodbridge	5 Dec.	10 A.M.	Foggy	S. 7	Running S.W.	Hartlepool	Ballast	-	Off
(106) Banff Schooner—94—5. (57 years.)	Harwich	London	21 Dec.	3 A.M.	Fine	S.W.; moderate.	1 knot	Sunderland	Ballast	-	Coatham
(128) Ann Brig—146—7. (8 years.)	Torquay	Torquay	1857. 1 Jan.	11 A.M.	-	S.W.	High water	Hartlepool	Ballast	-	Beach
(172) Emma Barque—260—9. (7 years.)	N. Shields	Shields	2 Jan.	10 A.M.	Moderate	N.	Flood, 6 hours' ebb.	Foreign	-	Coals	Rocks
(244) Hebe Schooner—124—5. (22 years.)	Yarmouth	Middlesbrough	-	-	Good	N.E.	-	Dordt	-	Iron	N. of Town, 1½ miles.
(262) Kingston Brig—224—8. (22 years.)	Hartlepool	London	19 Nov.	2 P.M.	Light breeze	S.W. 2	Flood	Hartlepool	Ballast	-	Rocks

slands and Flamborough Head, in 1856 and 1857—*continued.*

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18.	Lives lost. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	State any Particulars that can throw light on the Cause of the Casualty. 22.	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23.
Thick -	S.S.E. 5	1 hour flood -	Stranded; got off -	Nil. £200.	Running for harbour at low water in thick weather.	Yes. Driven back 100 miles.	Wind S.S.E. Not sufficient water.	Yes; Shields.
Stormy -	E.S.E. 5.	2½ hours' flood	Stranded; total - -	Nil. £800.	Stress of weather; missed stays.	Unknown - -	- - - -	Yes; Hartlepool.
Hazy - -	W.S.W. 5.	High water -	Stranded; got off - -	Nil. £310.	Stood in too close; ignorance of coast.	- - -	Thick weather - -	No.
Fine weather	N.E. 3	High water - -	Stranded; partial -	Nil.	Struck on bar whilst being towed out; heavy swell.	- - -	Not having been kept in mid-channel, and a heavy swell on.	No.
Fine - -	S.S.E. 5.	- - -	Stranded; got off -	Nil.	A man fell overboard whilst vessel was in tow; vessel stopped and anchored to get him up; weighed again before tow line was made fast, and drifted on the sand and filled.	—	—	—
Hazy - -	N.E.; sudden squall.	¼ flood - -	Dismasted; partial -	Nil.	Sudden squall - -	No - - -	Nothing but sudden squall; vessel was assisted into Bridlington.	Yes. Harbour of refuge at Redcar might probably have been taken advantage of; but Bridlington Bay was of itself sufficient refuge.
Sleet - -	E.N.E. 11	¼ ebb - -	Stranded; got off -	Nil. £400.	Sprung a leak in gale; run her on sand for safety.	Yes. Driven from S. cheek of Robin Hood's Bay to Tees.	Want of an accessible harbour.	Yes; either Whitby Redcar, or Hartlepool.
Thick - -	E. by N. 10.	Flood - -	Foundered; total -	7 £1,120.	Unknown; seen off Flamborough Head, but not after.	Yes; from Flamborough Head.	Supposed lost in Hartlepool Bay during gale.	Yes; Hartlepool.
Snow storm -	N.E. 11	Unknown -	Leaky; partial -	Nil.	Heavy sea strained ship, caused her to leak, &c. &c.	Yes. Driven from Berwick to Bridlington.	Shipping a heavy sea off Sunderland, which shifted the cargo.	Yes; a refuge harbour at Hartlepool would have saved her. She got into Bridlington with assistance.
- - -	S.W. 9.	- - -	Leaky; partial -	Nil.	Striking on a sunken keel.	Unknown -	A sunken keel lying in the Gut at Middlesbrough.	—
REDCAR.								
Clear - -	N.N.W. 4	¼ ebb - -	Leaky; total - -	Nil.	Sprung a leak in heavy sea; ran ashore to save her.	—	—	—
Rain - -	N.N.E. 9; heavy gale.	¼ flood -	Capsized; total -	1	Heavy gale - - -	No - -	First struck with a sea, and afterwards upset.	No.
Hazy - -	S.W. 2	¼ flood -	Stranded; got off -	Nil.	Fog, and neglect of lead	No - -	Out of course through negligence and want of sobriety.	No.
Foggy - -	W. to S.W. 6	1-hour ebb -	Stranded; got off -	Nil.	Thick weather; mistaking furnace lights for lights at S. side of Tees.	No - -	Nothing else than thick weather causing the lights to be mistaken.	No. A harbour of refuge would have been of no use in this case; the vessel proceeded to Sunderland with extra assistance.
Thick - -	W.S.W. 6.	¾ flood - -	Stranded; got off -	Nil.	Too close to shore; fog; lead not hove. Struck on rocks.	No - -	Solely owing to the fog -	No.
Thick - -	W.S.W. 6.	¾ flood - -	Stranded; total -	Nil.	Fog; no lead hove; struck on rocks.	—	—	—
Thick - -	W.S.W. 7.	¼ ebb - -	Stranded; got off -	Nil.	Got too near to rocks, staying her; when she wore, she went on to rocks.	No - -	In consequence of missing stays.	No.
Hazy - -	S.W. 10	¾ flood - -	Stranded on rocks; total -	Nil.	Sprung a leak and became unmanageable; got on rocks.	No - -	Weather being hazy, Seaton Carew Lights not visible.	Yes; at Redcar.
Hazy - -	N.E. 12	Flood; 1 knot setting N.	Stranded; got off -	Nil.	Dismasted by stress of weather; abandoned by crew off Sunderland.	No - -	Carrying a press of canvass to keep off a lee shore. Had reached N. to Hartlepool, when she was dismasted and abandoned.	—
Sleet - -	E.N.E. 11.	High water, 5 P.M.	Stranded; got off -	Nil.	Stress of weather; ballast shifted.	No - -	- - - -	If harbour at Redcar, Yes.
Thick - -	E.N.E. 11.	Low water -	Stranded; total -	Nil. £2,500.	Gale, lee shore - -	Yes; Flamborough Head.	Heavy gale from E.S.E. to E.N.E., with snow.	Yes; at Redcar or Hartlepool.
Thick, hazy -	S.E. 4	¾ flood -	Stranded; total -	Nil. £600.	Thick weather.	—	—	—
Thick - -	S.W. 9	¾ flood -	Stranded; total -	Nil. £1,000,	No lead nor look out -	- - -	Want of proper look-out. Wind S.W. Weather clear.	No.

Vessels in Distress on the EAST COAST of ENGLAND, betwee

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	 Cargo. 11.	Exact Spot where Casualty happened. 12.
(27) New Union Schooner—162—7. (9 years.)	London	Seaham	11 Feb.	-	Rather foggy	E.N.E.; light.	High water	London	-	Coals	Marske Beach, Yorkshire.
(135) Jane Brig—171—7. (13 years.)	Sunderland	Rochester	1 Jan.	1 A.M.	Moderate	S.W.	¼ ebb	Sunderland	Ballast	-	Marske Beach
(250) Robert Sloop—12—2. (Age unknown.)	Shields	Whitby	7 Oct.	-	-	S.E.	-	Newcastle	-	Iron	Off Huntcliff.
(28) John Barque—273—10. (31 years.)	Sunderland	Sunderland	9 Feb.	7 P.M.	Variable	S.; light	4 hours' flood	Gibraltar	-	Coals	Hole Wyke near Staithness.

SEA.

Name of Ship.	Port of Registry (if British).	Port sailed from.	Date of sailing.	Hour of sailing.	Weather at Time of sailing.	Wind at Time of sailing.	Tide Stream at Time of sailing.	Port bound to.	Ballast.	Cargo.	Exact Spot where Casualty happened.
(66) Alexander Brig—212—8. (15 years.)	Whitby	Hartlepool	18 Sept.	-	Moderate	Westerly, fresh.	Flood	Gottenburgh	-	Coals	Lat. 55° N. Long. 1° E.
(200) Equivalent Brig—220—8. (24 years.)	Sunderland	Sunderland	2 Mar.	-	Unknown	-	High water	Hamburgh	-	Coals	N. Sea, 54° N. N. L. 3° 30' E.

RUNSWICK BAY.

Name of Ship.	Port of Registry (if British).	Port sailed from.	Date of sailing.	Hour of sailing.	Weather at Time of sailing.	Wind at Time of sailing.	Tide Stream at Time of sailing.	Port bound to.	Ballast.	Cargo.	Exact Spot where Casualty happened.
(118) Amelia Brig—237—10. (Age unknown.)	Whitby	Hartlepool	-	-	-	-	-	London	-	Coals	Entrance of Runswick Bay.
(119) Peter and Mary (Schooner—78—4. Age unknown.)	Whitby	Shields	-	-	Not known	-	-	London	-	Coals	Ditto

SEA.

Name of Ship.	Port of Registry (if British).	Port sailed from.	Date of sailing.	Hour of sailing.	Weather at Time of sailing.	Wind at Time of sailing.	Tide Stream at Time of sailing.	Port bound to.	Ballast.	Cargo.	Exact Spot where Casualty happened.
(17) Onderneming Galiot—116—7. (25 years.)	Amsterdam	Amsterdam	4 Feb.	-	Moderate	S.S.W.	-	Newcastle	Ballast	-	Abandoned 6 miles from coast; Whitby bearing W.N.W.
(46) Eugenie Schooner—150—5. (14 years.)	Calais	Blyth	-	-	-	-	-	Bordeaux	-	Coals	15 miles from Whitby.
(180) Commerce Brig—204—7. (75 years.)	Sunderland	Sunderland	13 Jan.	3 A.M.	Fine	W.S.W.	High water	London	-	Coals	Whitby W.N.W. 3 miles.
(188) Triumph (Unknown.)	-	-	-	-	-	-	-	-	-	-	Off Whitby
(198) Aquila Brig—88—4. (30 years.)	Scarborough	Newcastle	19 Feb.	8 A.M.	Fresh	W.N.W. 5.	3 to 4 knots; spring tide.	Whitstable	-	Coals	10 miles off Whitby.
(236) Mermaid Schooner—22—2. (Age unknown.)	Lynn	Wisbeach	29 July.	Noon	Fine	S.E. 2	High water	Newcastle	-	Marine Stores.	Sea, 7 miles off Whitby.
(239) Nautilus Schooner—68—5. (9 years.)	Lynn	Shields	6 Aug.	2 P.M.	Fine	N.E. 2	½ flood	Lynn	-	Coals	10 miles off Whitby.
(259) Unicorn Schooner—118—6. (13 years)	Scarborough	Warkworth	14 Nov.	2 30 P.M.	Fine	N.E.	Flood	Holland	-	Coals	20 miles off Whitby.
(6) Mary Smack—19—2. (14 years.)	Berwick	Shields	10 Jan.	-	Snow showers	N. 5 & 6	Running S. High water about 4 30 P.M.	Grimsby	-	Coals	16 miles S. of Whitby.
(18) Amity Brig—220—9. (Age unknown.)	S. Shields	Seaham	6 Feb.	3 P.M.	-	S.S.W.; fresh breeze.	-	London	-	Coals	8 miles N.E. of Whitby.

WHITBY.

Name of Ship.	Port of Registry (if British).	Port sailed from.	Date of sailing.	Hour of sailing.	Weather at Time of sailing.	Wind at Time of sailing.	Tide Stream at Time of sailing.	Port bound to.	Ballast.	Cargo.	Exact Spot where Casualty happened.
(12) Josephine Schooner—99—6. (4 years.)	Cherbourg	Hartlepool	-	-	-	-	-	Charante	-	Coals	Rock
(55) Peace Brig—166—6. (32 years.)	Whitby	London	-	-	Fine	S.; moderate.	-	Newcastle	Ballast	-	Skinning Grove
(65) Ann Sloop—15—2. (Age unknown.)	Whitby	Hartlepool	-	-	-	-	-	Staithes	-	Coals	S. of E. pier

slands and Flamborough Head, in 1856 and 1857—*continued.*

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18.	Lives lost. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	State any Particulars that can throw light on the Cause of the Casualty. 22.	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23.
Misty	S.E. by E. 3.	½ flood	Stranded; got off	Nil.	Main halfyards giving way; too close to land; no lead hove.	No	From master hugging the shore.	No; refuge harbours are very necessary on the E. coast.
Gale	E.N.E. 11.	½ ebb	Stranded; total	Nil. £1,000.	Stress of weather split sails; could not command vessel.	No	Force of the gale only	Yes; Whitby or Redcar.
- - -	S.E. 7	- - -	Foundered; total	Nil.	Stress of weather	- - -	Masts carried away, &c.	—
Thick; rainy	S. 6	Nearly high water.	Stranded; got off	Nil.	Error in judgment	No	Stranding in thick weather.	No.

SEA.

Showery	N.N.E. 9	Too far from land to feel the tide.	Leaky and disabled; partial.	Nil.	Struck by heavy sea	Yes; ran back 160 miles to Grimsby. Had reached 100 miles E. on her voyage.	Was struck by a heavy sea.	Yes. Whitby would have been most convenient; as she could not reach one further N., as wind was N.E.
Showers	W. 5	- - -	Dismasted; partial	Nil. £50.	Squall	No	Squall of wind suddenly came on.	No; got into Sunderland.

RUNSWICK BAY.

Snow	E.N.E. 11	½ ebb	Foundered; total	10	Violent gale	Yes; and seen off Whitby about two hours before loss.	Violent gale and want of accessible harbour.	Yes; Whitby; both ship and crew.
Snow	E.N.E. 11	½ ebb	Foundered; total	4 £600.	Violent gale	Yes; how far not known.	Want of accessible harbour.	Yes; Whitby.

SEA.

- - -	S.W. 10	- - -	Abandoned; total	Nil.	Whole gale.	—	—	—
Dark	N.E. 6	- - -	Foundered; total	4	Sprung a leak.	—	—	—
Heavy	N. by E. 10.	Low water	Disabled; partial	Nil.	Heavy sea, washing decks, &c.	No	Stern frame started and hold beams broken.	Yes; Whitby. Assisted into Bridlington.
- - -	E.N.E. 11	- - -	Foundered; total.	—	—	—	—	—
Moderate	W. 2	½ flood	Foundered; total	Nil. £540.	Sprung a leak and foundered in deep water.	- - -	For want of harbour of refuge.	Yes; Redcar.
Fine	W.N.W. 5.	2 hours after high water.	Foundered; total	Nil. £60.	Leak	No	Strong wind during previous night.	No.
Squally	N.E. 7	¼ flood	Foundered; total	Nil. £600.	Leaky	No	Sprung a leak, and went down in half an hour.	No.
Clear	E.N.E. 5.	½ ebb	Foundered; total	Nil. £876.	Imperfect repairs and stress of weather.	No	Sprung a leak	No.
Snow showers	N. 5	¾ flood	Abandoned; total	Nil.	Sounded pumps; found water gaining and abandoned her. Pump spur broken.	No	Leaky, with pump out of order; the only cause. Had reached S. on her voyage about 42 miles.	No.
- - -	W.N.W. 10.	- - -	Stranded; got off	Nil.	Caught in a gale; decks swept.	- - -	- - - -	Towed into Scarborough.

WHITBY.

Hazy	N.W. 4	Low water	Stranded; got off	Nil.	Was running with studding sails set in thick weather. No lead going.	No	- - - -	No.
Rainy	N.N.E. 9.	1 hour ebb	Stranded; got off	Nil.	Stress of weather	No	- - - -	No; but it is stated by agent that vessel was off Whitby on preceding night when it was blowing hard, and would most certainly have come in had harbour been accessible.
Fine; clear	N.N.W. 5	½ flood	Struck pier head; total		Running for harbour	No	The tow rope to the tug steamer broke; vessel struck pier; canted seaward and sunk.	Yes; Whitby.

Vessels in Distress on the EAST COAST of ENGLAND, betw

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Cargo. 11.	Exact Spo where Casualty happened. 12.
(102) Fanny Huntley Brig—222—9. (5 years.)	London	Hull	1856 19 Dec.	Noon	Moderate	W.S.W. 3.	Ebb	Middlesbrough	Ballast	-	100 yards N E. pier harbour
(114) Medora Brig—201—7. (10 years.)	Whitby	London	1857. 1 Jan.	5 A.M.	Not known	-	-	Whitby	Ballast	-	1¼ mile
(115) Port Glasgow Schooner—85—5. (25 years.)	Whitby	London	-	-	Fine	S.W.; moderate.	Unknown	Whitby	Ballast	-	Lough Da
(127) Mary & Jane Schooner—118—7. (12 years.)	Teignmouth	Teignmouth	1 Jan.	-	Fine	W.S.W. 4.	4 hours' flood	S. Shields	Ballast	-	1½ mile
(147) Lively Schooner—72—5. (20 years.)	Guernsey	London	1 Jan.	-	-	-	-	Shields	Ballast	-	Near
(159) William Pitt Brig—223—7. (15 years.)	Hartlepool	London	2 Jan.	Unknown	-	W.N.W.	Flood	Hartlepool	Ballast	-	½ mile fr
(169) Abeona Brig—159—6. (44 years.)	London	London	2 Jan.	-	-	-	-	Hartlepool	Ballast	-	Sandsend
(193) Fencer Schooner—106—7. (14 years.)	Gravesend	Hartlepool	-	-	-	-	-	Gravesend	-	Coals	Rocks
(204) Kathleen Brig—158—7. (15 years.)	Hartlepool	Hartlepool	16 March	6 P.M.	-	S.W. 5	Flood	London	-	Coals	Rocks
(207) Mary Schooner—61—4. (7 years.)	Sunderland	Sunderland	-	-	-	-	-	Woodbridge	-	Coals	W. pier
(212) Celerity Smack—60—8. (Age unknown.)	Whitby	Hartlepool	16 Mar.	5 P.M.	Fine	W.S.W.; fresh.	Flood	London	-	Coals	½ mile N. west pier
(241) Isabella Brig—129—6. (48 years.)	Whitby	Newcastle	-	-	-	-	-	London	-	Coals	Church Lan
(252) Runcinia Schooner—74—3. (17 years.)	Whitby	Whitby	19 Oct.	5 A.M.	Fine	S.W. 5	Spring tide	Tyne	-	Ironstone	Phillips' rock
(254) Traveller Brig—113—6. (Age unknown.)	Whitby	Seaham	21 Oct.	3 30 P.M.	Fine	W.N.W.	Young flood	Lynn	-	Coals	Rocks near

SEA.

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Cargo. 11.	Exact Spo where Casualty happened. 12.
(240) Pallion Hall Brig—133—6. (17 years.)	Sunderland	Sunderland	6 Aug.	-	Fresh	N.E.	-	Boulogne	-	Coal for gas.	Off Head's b
(67) John Brig—163—6. (51 years.)	Shields	Shields	1856. 19 Sept.	7 P.M.	Moderate	N.	-	London	-	Coals	6 miles Robin Hood's Bay.

ROBIN HOOD'S BAY.

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Cargo. 11.	Exact Spo where Casualty happened. 12.
(19) Maria Sloop—40—3. (Age unknown.)	Rye	Rye	4 Feb.	11 A.M.	Fine	Light breezes S.	High water	Sunderland	-	Oak.	Robin Hood's Bay.
(120) Queen Dowager Schooner—120—6. (14 years.)	Whitby	Gravesend	1857. -	-	Not known	-	-	Hartlepool	Ballast	-	Robin Hood's Bay.
(121) Mary and Ann Schooner—10—4. (20 years.)	Whitby	Shields	-		Not known	-	Neap tide	Woolwich	-	Coals	Robin Hood's Bay.
(153) George Schooner—116—6. (7 years.)	Colchester	Colchester	1 Jan.	Noon	Fine	S.W.; moderate.	Ebb	Seaham	Ballast	-	Robin Hood's Bay.

SEA.

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Cargo. 11.	Exact Spo where Casualty happened. 12.
(23) Mary Jane Brig—132—7. (12 years.)	Dartmouth	London	1856. 2 Feb.	Between 7 & 8 A.M.	Clear	W.N.W. 4.	½ an hour before high water.	Hartlepool	Ballast	-	Off Scarboro
(234) Jantina Galliot—57—4. (7 years.)	Groningen	Newcastle	-	-	-	-	-	Groningen	-	Coals	25 miles N. of Scarboro
(20) Yorkshire Brig—315—18. (Age unknown.)	Stockton	W. Hartlepool	1856. 3 Feb.	2 A.M.	-	W.S.W. 5.	Near high water.	Havre-de-Grace.	-	Coals	Scarborough W. by N. miles.

lands and Flamborough Head, in 1856 and 1857—*continued.*

Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18.	Lives lost. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	State any Particulars that can throw light on the Cause of the Casualty. 22.	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel? 23.
Snow squall -	E. 12	High water -	Struck pier; partial -	Nil.	Slightly struck on a bar, and losing steerage way ran against S.E. pier.	No - -	Entrance to Whitby harbour not being of sufficient width.	Yes; had entrance to Whitby harbour been wider, and greater depth of water, accident would not have occurred.
Snow - -	E. by S. 11.	1 hour before high water.	Stranded; got off -	Nil. £600.	Ran ashore to save life; could not keep off land.	No - -	Off Whitby early in morning; could not get northerly nor take harbour.	Yes; Whitby.
Thick - -	E. 11	4 hours' ebb -	Stranded; got off -	Nil. £300.	Violent gale; could not keep off.	No - -	Brought up in Whitby Roads; cut away mast; broke chains and drove to Lythdale, 3 miles.	Yes; Whitby.
Thick - -	E.N.E. 11.	2 hours' ebb -	Stranded; total -	Nil. £700.	Heavy gale and sea on lee-shore.	No - -	- - - -	Yes; if harbour at Filey, might have been saved.
Squally -	E.N.E. 11.	Low water -	Stranded - -	Nil. £300.	Disabled by bad weather and collision; drifted ashore.	—	—	—
Snow - -	E. 11	¼ ebb - -	Stranded - -	Nil. £300.	Stress of weather -	No - -	Unmanageable, canting ballast in gale; reached Rockliffe, distant 10 miles.	Yes; Hartlepool.
Hazy - -	E.N.E. 11.	- - -	Stranded - -	Nil. £200.	Stress of weather, lost sails and went on rocks.	Unknown -	- - - -	Yes; if harbour at Filey or Whitby.
Dark; hazy -	S.W. 3	- - -	Stranded - -	Nil.	—	—	—	—
Thick - -	S.W. 3	High water -	Stranded; got off -	Nil.	Mistook Runswick furnace for Whitby light.	No - -	Mistaking lights during fog.	No.
Cloudy -	S.E. 8	¾ flood -	Stranded; total -	Nil. £340.	Mistook lights on entering harbour.	—	—	—
Clear - -	E.S.E. 8.	Young ebb -	Stranded; total -	Nil.	Sprung a leak; ran ashore to save life.	No - -	Made for Whitby; not sufficient water; ran for shore.	Yes; Whitby.
Thick - -	S. by E. 5.	High water -	Foundered; total -	Nil.	Too near land in thick weather.	No - -	Error in judgment.	—
Fine - -	S.W. 5	½ ebb - -	Stranded; got off -	Nil.	Stood too near land; vessel too much by the head.	No - -	- - - -	Put into Whitby.
Fine - -	N.N.W. 6.	½ flood -	Stranded; total -	Nil. £800.	Steering too near land -	No - -	Carelessness of master -	No.

SEA.

Thick -	N.E. 7	- - -	Explosion; total -	Nil. £800.	Gas from coal ignited, and blew vessel up.	—	—	—
Clear - -	N. 6	Low water -	Dismasted; partial -	Nil	Stress of weather; struck by heavy vessel.	—	—	—

ROBIN HOOD'S BAY.

Hurricane from shore.	Blowing	Low water -	*Abandoned; total -	Nil.	Anchored in a hurricane, drove from anchors, dismasted and abandoned.	No - -	Becoming dismasted -	No.
Squally -	E.N.E. 9.	Low water -	Foundered; total -	Nil. £1,250.	Stress of weather -	No - -	Want of accessible harbour.	Yes; Filey.
Squally -	E.N.E. 9.	½ ebb - -	Foundered; total -	4 £600.	Violent gale -	No - -	Want of an accessible harbour at Whitby.	Yes; Whitby. Vessel lost 6 miles S. of Whitby.
Squally -	E.N.E. 9.	High water -	Stranded; got off -	Nil. £900.	Stress of weather -	No - -	Heavy sea; could not keep vessel off land.	Yes; Redcar.

SEA.

Clear - -	W. 11	- - -	Dismasted; partial -	Nil.	Stress of weather; dismasted and thrown on beam ends by heavy squall.	No - -	- - - -	No; towed into Grimsby to repair.
Clear - -	N.E. 6	- - -	Foundered; total -	Nil. £230.	Lee board got under vessel's bottom and stove her.	—	—	—
Gale - -	W.S.W.	½ flood -	Stranded; got off -	Nil.	Caught in a gale; leaky.	No.	—	—

* This vessel was subsequently picked up derelict, and repaired.

Vessels in Distress on the EAST COAST of ENGLAND, between th

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo.		Exact Spot where Casualty happened. 12.	Date of Casualty 13.
									Ballast. 10.	Cargo. 11.		
SCARBOROUGH.												
(8) Tyne Brig—86—5. (30 years.)	N. Yarmouth	Middlesbrough	1856. -	3 P.M.	-	W.S.W.	-	Southwold	-	Coals	2 miles S. of Nab.	1856. 17 Ja
(37) Shamrock Brig—91—5. (Age unknown.)	Whitstable	Whitstable	17 Mar.	9 A.M.	Thick	S.E.; moderate.	-	Coal Port	Ballast	-	Crook Point, 4 miles N. of Creek.	8 Ma
(79) Elizabeth Brig—74—4. (44 years.)	Sunderland	Methill	-	-	-	-	-	London	-	Coals	2 miles S. of	4 No
(83) Lybia Brigantine—111—5. (13 years.)	King's Lynn	Seaham	17 Nov.	7 30 A.M.	Hazy	W.S.W. light.	Flood	Lynn	-	Coals	5 miles from	15 No
(89) Ivy Brig—199—8. (19 years.)	Scarborough	Scarborough	4 Dec.	11 A.M.	Very thick	W.N.W.	¼ ebb	Newcastle	Ballast	-	Redcliffe, 5 miles S. of.	4 De
(122) Northumberland Brig—196—8. (12 years.)	Whitby	London	1857. 1 Jan.	-	-	Not known		Sunderland	Ballast	-	Sands	1857. 4 Ja
(124) Thompson Brig—190—7. (Age unknown.)	Whitby	London	2 Jan.	-	-	Not known		Shields	Ballast	-	Sands; near W. pier.	4 Ja
(139) Happy Return Smack—23—5. (Age unknown.)	Scarborough	Fishing Ground	3 Jan.	Morning	-	S.S.E. 10.	High water	Scarborough	Ballast	-	1 mile S. of	4 Ja
(140) Eurus Brig—272—11. (22 years.)	South Shields	London	2 Jan.	4 P.M.	Unknown	Unknown	-	Shields	-	Coals	Sands; near W. pier.	4 Ja
(141) Wilsons Brig—227—9. (20 years.)	Shields	Shields	2 Jan.	7 A.M.	Unknown	Unknown	-	London	-	Coals	Sand, W. pier	4 Ja
(150) Trois Sœurs Schooner—79—6. (4 years.)	Cherbourg	Cherbourg	-	-	-	-	-	Coal Port	Ballast	-	Behind pier	4 Ja
(175) Samuel Cunard Barque—206—10. (17 years.)	Antigua	Gothenburg	25 Dec.	7 A.M.	-	E.N.E.; gale.	Unknown	London	-	Timber	4 miles from	6 Ja
(219) Concordia Galliott—60—5. (Age unknown.)	Lenvig in Denmark.	Denmark	-	-	-	-	-	London	-	Barley	1½ mile S. of rocks.	2 Ma
(223) William and Matthew. Schooner—119—5. (Age unknown)	Scarborough	Scarborough	17 Mar.	-	Moderate	N.W.	¾ ebb	London	-	Coals.	Pier	9 Ma
(227) James Brig—186—8. (54 years.)	Shields	Havre	1 April	2 P.M.	Unknown	-	-	Newcastle	Ballast	-	7 miles N. of	4 Ap
(237) Lizzie Schooner—79—3. (16 years.)	Sunderland	London	1 Aug.	-	Fine	S.W.	Ebb tide	Sunderland	Ballast	-	High Wyke 7 miles N. of.	5 Au
SEA.												
(58) Perseverance Schooner—34—3. (50 years.)	Wells	Shields	1856. 31 July	3 P.M.	Fine	S.S.E.	Flood	Caen	-	Coals.	10 miles off Filey, W.S.W.	1856. 5 Au
(62) Mersey Schooner—64—4. (38 years.)	Montrose	Grangemouth	21 Aug.	6 A.M.	-	E.; blowing strong.	Flood	Dunkirk	-	Iron.	4 miles E. by S. of Filey.	28 Au
FILEY.												
(76) Astrea Brig—85—8. (30 years.)	Whitby	London	2 Nov.	-	-	-	-	Whitby	-	General	¼ mile S. of Coast Guard Station.	13 No
(111) William IV. Schooner—62—3. (26 years.)	Clay	London	1857. 2 Jan.	7 A.M.	-	-	-	Shields	Ballast	-	1 mile S. of	1857. 4 Ja
(126) Ratcliffe Barque—288—9. (49 years.)	Whitby	Hartlepool	2 Jan.	8 P.M.	-	W.	Not known	London	-	Coals	Beach	4 Ja
(264) Industry Smack—36—5. (Age unknown.)	Grimsby	Grimsby	4 Dec.	Midnight	Fine	W.S.W.	-	Scarborough	-	Fish	Abreast of Coast Guard Watchhouse.	13 De

Farn Islands and Flamborough Head, in 1856 and 1857—*continued*.

Hour of Casualty. 14.	Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18.	Lives lost. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	State any Particulars that can throw light on the Cause of the Casualty. 22.	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel 23.

SCARBOROUGH.

4 15 A.M.	Very thick -	S.S.W. 6	Half ebb -	Stranded; total -	Nil.	Not heaving lead in thick weather.	No.	—	
6 15 A.M.	Hazy - -	S.E. 1	- - -	Stranded; total -	Nil.	Stress of weather; too near shore through not having lead.	—	—	—
1 P.M.	Strong gale -	N.N.E. 9.	Flood -	Stranded; total -	Nil.	Came ashore two miles S. of Scarborough, through loss of rudder head by violence of the gale.	- - -	Come ashore on the rocks two miles S. of Scarborough, and became a total wreck, and strewed about the coast.	—
12 20 P.M.	Hazy -	W.; moderate.	Ebb - -	Foundered; total -	Nil.	Leak commenced on leaving Seaham, and increased rapidly.	No - -	Iron vessel; rivet or plate supposed to have started.	No. Wind W. to V by N. blowing hard.
11 A.M.	Very thick -	W.N.W. 4.	Ebb - -	Stranded; got off -	Nil.	Waiting off and on to put pilot on shore.	No - -	- - - -	No.
10 A.M.	Squally -	E. 10	Last quarter flood.	Stranded; got off -	Nil.	Stress of weather; sails split, &c.	No - -	Violent gale dead on shore.	Yes; Filey.
9 A.M.	Heavy squall -	E. 10	Last quarter flood.	Stranded; got off -	Nil.	Lost sails, &c.; hove cable on pier, which broke, and ship fell away.	No - -	Violent gale dead on shore, and want of harbour of refuge.	Yes; Filey.
2 P.M.	Snow squall -	E. 11	½ ebb - -	Stranded; total -	Nil. £100.	Stress of weather; sails split, &c.	Yes; driven by weather from fishing ground, and stranded 1 mile S. of Scarborough.	Stormy weather - -	Yes; Filey.
12 30 P.M.	Snow - -	E. 10	¼ ebb - -	Stranded; total -	4	Standard of wheel broke in trying to make Scarborough.	No - -	- - - -	Yes; Filey.
Noon	Snow squall -	E. 10	¼ ebb - -	Stranded; total -	1 £120.	Stress of weather; running for harbour, drove on sand.	Yes; a little way beyond Flamborough Head.	Made for shore to save life.	Yes; if at Filey migh have been saved.
10 30 P.M.	Stormy -	E.N.E. 11.	- - -	Stranded; got off -	Nil. £350	Running for harbour, struck pier.	—	—	—
30 A.M.	Snow squall -	E. 11	½ ebb - -	Stranded; total -	1	Stress of weather; could not keep off land.	—	—	—
4 P.M.	Thick snow squall.	- -	½ flood - -	Stranded; total -	Nil. £1,350	Struck rock S. of Scarborough.	—	—	—
4 P.M.	- - -	E. 10	High water -	Stranded; got off -	Nil.	Running for shelter. struck harbour.	No - - -	Laden vessel and stormy weather.	No.
Noon	Thick - -	E. 1	High water -	Stranded - -	Nil. £1,000.	Ran ashore in thick weather.	—	—	—
45 A.M.	Clear - -	N.E. 2	Ebb - -	Stranded; total -	Nil.	Too close to shore; anchored, and cables parted.	Yes. Higham Wyke.	—	—

SEA.

2 A.M.	Fine - -	N.N.E. 2	Low water -	Foundered; total -	Nil.	Sprung a leak - -	No - - -	The vessel was very old; supposed hoveing forward gave way, and only one pump, which was choked.	No.
20 P.M.	Fine - -	S.S.W. 6	High water -	Foundered; total -	Nil.	Strong wind and heavy sea strained ship.	- - - -	Not seaworthy - -	Yes. Had there be a deepwater harbo in Tees Bay Whitby, ship cou have been saved.

FILEY.

-	Squally -	E.N.E. 10.	½ flood -	Stranded; got off -	Nil.	Stress of weather. Brought up in Filey Bay for shelter; cables parted.	No - -	Want of an accessible harbour.	Yes; Filey.
30 A.M.	Thick rain -	E. by N. 12.	High water -	Stranded; got off -	Nil.	Drove from anchors in Filey Bay.	- - -	- - - -	Yes; Filey.
30 P.M.	Thick rain -	E. by N. 12.	¼ ebb - -	Stranded; total -	Nil. £ 800.	Gale; could not make Flamborough Head; ran ashore to save life.	No - -	Want of accessible harbour.	Yes; Filey.
5 A.M.	Fog - -	W.S.W. 2.	High water -	Stranded - -	Nil.	Inattention in a thick fog.	—	—	—

Vessels in Distress on the EAST COAST of ENGLAND between the

SEA.

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Whether in Ballast or with Cargo. Cargo. 11.	Exact Spot where Casualty happened. 12.	Date of Casualty. 13.
(3) Storm King Barque—300—12. (15 years.)	Shields	Shields	1856. -	-	-	-	-	Constantinople	-	Coals	Off Flamborough Head.	1856. 17 Jan.
(7) Storm King Barque—300—12. (15 years.)	Shields	Shields	-	-	-	-	-	Constantinople	-	Coals	Off Flamborough Head.	17 Jan.
(9) General Murray Brig—140—7. (Age unknown.)	Ramsgate	Shields	16 Jan.	-	Stormy	S.E. 10	-	London	-	Coals	Flamborough Head, W. by S. 15 miles.	19 Jan.
(10) Thomas and Elizabeth. Galliot—56—4. (13 years.)	London	Seaham	21 Jan.	-	-	-	-	Fosdyke	-	Coals	Off Flamborough Head.	23 Jan.
(26) Reine Schooner—74—6. (Age unknown.)	Belgium	-	-	-	-	-	-	-	-	-	20 miles N.E. of Flamborough Head.	11 Feb.
(31) Ramsgate Sloop—43—3. (Age unknown.)	Boston	Newcastle	-	-	-	-	-	London	-	Bricks	9 miles N.E. of Bridlington.	23 Feb.
(50) Samson Ketch—93—5. (4 years.)	Cowes	Cowes	2 May	4 30 P.M.	Fine	W.; light breeze.	Tide flowing	Sunderland	Ballast	-	6 miles from Flamborough Head.	7th May
(123) Atlantic Brig—213—8. (18 years.)	Shields	London	1857. -	-	-	-	-	Shields	Ballast	-	Off Flamborough Head.	1857. 4 Jan.
(202) Ryhope Smack—175—8. (30 years.)	Hartlepool	Hartlepool	12 Mar.	2 A.M.	-	W.N.W. 6.	High water	London	-	Coals	10 miles E. of Flamborough Head.	14 Mar.
(209) George IV. Brig—141—6. (Age unknown.)	Shields	Shields	16 Mar.	-	-	-	-	Hamburgh	-	Coals	Off Flamborough Head.	20 Mar.
(233) Diamond Sloop—45—3. (31 years.)	Goole	Middlesbrough	-	-	-	-	-	London	-	Iron	6 miles off Flamborough Head.	7 June
(236) Vigilant Brig—149—6. (Age unknown.)	Seaham	Seaham	5 Aug.	12 30 P.M.	Blowing strong	N.E. by E.	-	London	-	Coals	Off Flamborough Head.	6 Aug.
(247) John Sloop—41—4. (16 years.)	Hull	Wisbeach	-	-	-	-	-	Newcastle	-	Wheat	10 miles N. of Flamborough Head.	15 Sept.
(261) Jenny Schooner—123—5. (Age unknown.)	Whitby	Hartlepool	21 Nov.	6 A.M.	Fine	W.	-	London	-	Coals	Off Flamborough Head.	21 Nov.

FLAMBOROUGH HEAD.

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Whether in Ballast or with Cargo. Cargo. 11.	Exact Spot where Casualty happened. 12.	Date of Casualty. 13.
(59) Impetuous Brig—174—8. (1 year.)	Rye	Rochester	1856. 7 Aug.	2 P.M.	Fine; gentle breeze.	S.S.W.	3 hours' flood	Shields	Ballast	-	Steel Point, Flamborough Head.	1856. 10 Aug.
(60) St. Louis Lugger—60—25. (Age unknown.)	Fecamp	-	-	-	-	-	-	Fishing	-	Nets	Steel Point, Flamborough Head.	10 Aug.
(90) Earl of Leicester Brig—147—8. (17 years.)	London	London	28 Nov.	2 P.M.	Light	W. by W.	Ebb	Hartlepool	Ballast	-	Steel Point, Flamborough Head.	4 Dec.
(96) J. and A. Gorving. Schooner—123—6. (10 years.)	Shields	Maldon	18 Nov.	-	-	-	-	Shields	Ballast	-	West Noke, Flamborough Head.	5 Dec.
(192) Salus Brig—161—7. (32 years.)	Sunderland	Sunderland	1857. 31 Jan.	3 P.M.	Fine	W.N.W.	High water	London	-	Coals	Flamborough Head.	1857. 2 Feb.
(242) Eupatoria S.S.—34—16. (Age unknown.)	London	Shields	15 Aug.	11 A.M.	Foggy	S.E.; moderate.	Ebb	French Port	-	Coals	Flamborough Head.	15 Aug.
(263) Active Schooner—79—6. (Age unknown.)	St. Servan	Dunkerque	-	-	-	-	-	Sunderland	Bal'ast	-	S. part of Flamborough Head.	24 Nov.

SOUTH OF FLAMBOROUGH HEAD.

Name of Ship. 1.	Port of Registry (if British). 2.	Port sailed from. 3.	Date of sailing. 4.	Hour of sailing. 5.	Weather at Time of sailing. 6.	Wind at Time of sailing. 7.	Tide Stream at Time of sailing. 8.	Port bound to. 9.	Whether in Ballast or with Cargo. Ballast. 10.	Whether in Ballast or with Cargo. Cargo. 11.	Exact Spot where Casualty happened. 12.	Date of Casualty. 13.
(164) Perseverance Brig—299—11. (Age unknown.)	Newcastle	Newcastle	-	-	-	-	-	Copenhagen	-	Coals	Kilnsea Beach	4 Jan.
(74) Brack Snow—217—9. (32 years.)	Shields	Shields	-	-	-	-	-	Hamburgh	-	Coals	Struck on sunken wreck near Burcam Reef.	1856. 25 Oct.

Farn Islands and Flamborough Head, in 1856 and 1857—*continued.*

SEA.

Hour of asualty. 14.	Weather at Time of Casualty. 15.	Wind at Time of Casualty. 16.	Tide at Time of Casualty. 17.	Nature of Casualty, and whether occasioning total Loss or only partial Damage. 18.	Lives lost. 19.	Circumstances which caused the Casualty. 20.	Was the Vessel driven back; and, if so, how far had she reached Southward or Northward on her Voyage? 21.	State any Particulars that can throw light on the Cause of the Casualty. 22.	Would Harbour of Refuge at Bridlington, Filey, Whitby, Redcar, Hartlepool, Sunderland, or Shields, have saved the Vessel 23.
-	Heavy -	Variable. 7.	- - -	Dismasted - -	Nil. £200.	Heavy gale - -	- - -	- - - -	Not answered. Vess put into Leith to discharge and repair.
-	Heavy -	Variable. 7.	- - -	Dismasted in a gale; partial.	Nil.	Stress of weather -	Yes - -	- - - -	Put into Leith.
30 A.M.	Thick - -	E.N.E. 4.	Slack water -	Foundered; total -	Nil.	Starting a butt, or knocking against floating wreck.	No - -	Vessel old. Too much strain upon her, caused by being under double-reefed topsails.	Yes; Filey.
6 A.M.	Gale - -	S.S.E. 11	- - -	Loss of sails, &c.; partial.	Nil.	Stress of weather; strained very badly and lost sails, tore away rudder and started seams.	No.	—	—
-	- - -	- -	- - -	Foundered; total.	—	—	—	—	—
2 30 P.M.	Hazy - -	N.N.E. 6.	- - -	Foundered; total -	Nil.	Sprung a leak; could not be kept under	—	—	—
2 P.M.	Clear - -	E. 8	Spring tide, nearly high water.	Dismasted; partial -	Nil.	Stress of weather -	Driven back from Flamborough Head about 14 miles; taken in tow by steamer to Lowestoft.	Heaviness of the gale only.	Yes. "If a refuge harbour at Bridlingto or Filey, I coul have run for it, an saved the hire o steamer." M.
30 A.M.	Hazy - -	E. 9	- - -	Stranded; got off -	Nil.	Stress of weather - -	No - -	Gale split sails, rendered vessel unmanageable.	—
7 A.M.	Rainy - -	S. by E. 10	Ebb - -	Dismasted; partial -	Nil. £500.	Stress of weather -	No - -	Sudden squall carried master overboard.	Put into Whitby.
8 A.M.	Bad - -	S.E. 10	- - -	Leaky; partial - -	Nil.	Bad weather -	- - -	- - - -	Put into Leith.
9 P.M.	Thick - -	E. by S. 2.	¼ flood -	Leaky; partial - -	Nil.	Struck on sunken wreck	- - -	- - - -	Put into Bridlington.
8 P.M.	N.E. by E; strong.	N.E. by E.; strong.	- - -	Leaky; partial - -	Nil.	Stress of weather -	- - -	Leaky off Flamborough Head; made for Bridlington harbour to save crew and ship.	—
10 A.M.	Cloudy -	N.N.E. 6.	- - -	Leaky; partial - -	Nil.	Heavy sea -	- - -	Sprung a leak in heavy sea.	Assisted into Bridlington.
8 A.M.	Fine - -	W. 9	- - -	Leaky; partial - -	Nil.	Sprung a leak - -	No - -	- - - -	No. Got into Scarborough for repair.

FLAMBOROUGH HEAD.

14.	15.	16.	17.	18.	19.	20.	21.	22.	23.
10	Thick fog -	E.S.E. 2.	¾ flood -	Stranded; got off -	Nil.	Fog - - -	No - -	Binnacle compass being in bad order, card got wet and stuck to the glass.	No.
10	Fog - -	E.S.E. 2.	¼ flood -	Stranded; got off -	Nil.	Following a brig; want of caution.	No.	—	—
11 A.M.	Very thick -	W. 2	Ebb; 1 hour's flood in stream.	Stranded; got off -	Nil.	Keeping too close to shore in a fog.	No - -	Thick weather, and flood setting her in.	No.
6 P.M.	Thick - -	S. by W. 6.	2 hours' flood	Struck; seriously damaged.	Nil.	Thick weather; too close to shore; no lead going.	— —	—	—
4 A.M.	Fine -	S.W. 5	Low water -	Struck; foundered -	Nil. £810.	Neglect of lead - -	Yes. Driven back 10 miles.	- - - -	Yes; Bridlington.
9 30	Hazy - -	N.N.W. 5.	Ebb - -	Stranded; total -	Nil.	Full speed; dense fog; no lead.	No - -	Sufficient allowance not being made for the in-draft of the ebb tide.	No.
-	Cloudy -	N.W. 6	- - -	Stranded - - -	Nil.	Too close to land; sudden change of wind.	—	—	—

SOUTH OF FLAMBOROUGH HEAD.

14.	15.	16.	17.	18.	19.	20.	21.	22.	23.
-	Rough -	E. by N. 11.	- - -	Stranded; total -	4 £1,800.	Could not carry sail; drifted.	—	—	—
8 A.M.	Hazy - -	S.S.E. 9	¼ ebb - -	Stranded; total -	Nil.	Lead not hove; ship out of her course.	No.	—	—

APPENDIX No. 1.—PART III.—ABSTRACT OF CASUALTY RETURNS.

NORTH-EAST COAST OF SCOTLAND.

DISTRICTS.	Casualties during 7 years from 1850-57, excluding 1855.							Ports and Sections of Coast.	Lives Lost during 7 Years from 1850-57, excluding 1855.				
	From Foundering.	From Wrecks occasioned by Stress of Weather.	From Wrecks occasioned by All other Causes.	Vessels. Total Lost.	Vessels. Annual Average	Approximate Value. Total.	Approximate Value. Annual Average		From Foundering.	From Stress of Weather.	All other Causes.	Total.	Annual Average
Exterior to the	2	28	44	74	10 4/7	£ 31,760	£ 4,537 1/7	Shetland Islands Orkney Islands	12	26	10	48	6 6/7
	1	4	16	21	3	11,030	1,575 5/7	Cape Wrath to Duncansby Head	0	10	0	10	1 3/7
	3	32	60	95	13 4/7	42,790	6,112 6/7		12	36	10	58	8 2/7
EAST COAST of MORAY FIRTH.	3	3	18	24	3 3/7	10,440	1,491 3/7	Duncansby Head to Cromarty Firth, including Wick	0	0	0	0	0
	0	3	4	7	1	2,110	301 3/7	Inverness	0	0	0	0	0
SOUTH COAST of MORAY FIRTH.	1	26	26	53	7 4/7	18,335	2,619 2/7	Findhorn Lossiemouth Speymouth Port Gordon† Banff and Macduff Troup Head	4	12	5	21	3
* See Remarks.	0	4	14	18	2 4/7	4,010	572 6/7	Fraserburgh	0	4	0	4	0 4/7
	4	36	62	102	14 4/7	34,895	4,985		4	†16	5	†25	†3 4/7
RATTRAY HEAD to the TAY.	0	1	6	7	1	11,770	1,681 3/7	Rattray Head	0	0	0	0	0
	1	5	18	24	3 3/7	6,985	997 6/7	Peterhead	6	5	0	11	1 4/7
	0	2	7	9	1 2/7	3,186	455 1/7	Buchan Ness Newburgh	0	8	1	9	1 2/7
	0	8	13	21	3	37,760	5,394 2/7	Aberdeen	0	28	0	28	4
	1	3	7	11	1 4/7	5,074	724 6/7	Portlethen Stonehaven Katterline	0	14	0	14	2
	3	10	8	21	3	9,680	1,382 6/7	John's Haven Montrose	0	20	6	26	3 5/7
TAY.	1	6	3	10	1 3/7	5,390	770	Arbroath	0	5	0	5	0 5/7
	1	4	23	28	4	16,800	2,400	Dundee St. Andrews	4	0	3	7	1
FIRTH OF FORTH.	14	37	86	137	19 4/7	59,401	8,485 6/7	Bell Rock May Island Elie Bay Inch-Keith Burnt Island Firth of Forth Leith Dunbar St. Abb's Head	11	46	18	75	10 5/7
	21	76	171	268	38 2/7	156,046	22,292 2/7		21	126	28	175	25
	28	144	293	465	66 3/7	233,731	33,390 1/7	General Totals	37	178	43	258	36

REMARKS.—The casualties exterior to the district are given, because, as shown in the Report, they affect to some extent the question of refuge at Wick.

Minutes of Evidence, Mr. D. McGregor, Mr. R. Colme.

As the Firth of Forth affords excellent refuge, the comparatively large number of casualties which occur there, must be attributed to the number of disabled vessels which run for it in bad weather and meet with accidents in doing so. It would, however, appear, that in order to render the anchorage of St. Margaret's Hope, in the upper part of the Firth, thoroughly accessible as a harbour of refuge, two lights are required, one on Inch Colm, the other on Inch Gorrie.

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* The casualties occurring to *vessels only* being given in the above abstract, those occurring to *fishing boats do not appear*; they are, however, far too important to be passed over without distinct notice.

† In a violent gale in November 1857, 43 men were lost in fishing boats belonging to the neighbourhood of Port Gordon, leaving 79 children fatherless and 27 widows, the exact spot where the boats were swamped not being known, though from their having been seen half way across the Moray Firth, it is possible they never reached the shore.

In August 1848 as many as 100 men were lost, 37 at Wick and its vicinity, and the remainder at Helmsdale, Peterhead, and Stonehaven.

NORTH AND EAST COASTS OF IRELAND.

Districts.	Casualties during 7 Years from 1850-57, excluding 1855.							Ports and Sections of Coast.	Lives Lost during 7 Years from 1850-57, excluding 1855.				
	From Foundering.	From Wrecks occasioned by Stress of Weather.	From Wrecks occasioned by All other Causes.	Vessels. Total Lost.	Vessels. Annual Average	Approximate Value. Total.	Approximate Value. Annual Average		From Foundering.	From Stress of Weather.	All other Causes.	Total.	Annual Average
						£	£						
Northern Channel.	1	5	8	14	2	18,155	2,593 4/7	Arranmore Sheep Haven	0	0	0	0	0
	0	3	7	10	1 3/7	19,001	2,714 3/7	Lough Swilley Malin Head	0	3	0	3	0 3/7
	0	6	10	16	2 2/7	8,670	1,238 4/7	Lough Foyle	0	3	0	3	0 3/7
	0	1	5	6	0 6/7	3,510	501 3/7	Innishowen Coleraine	0	0	0	0	0
	0	3	6	9	1 2/7	3,100	442 6/7	Port Rush	0	2	0	2	0 2/7
	0	2	7	9	1 2/7	14,980	2,140	Rathlin Island	0	0	0	0	0
	0	12	4	16	2 2/7	12,120	1,731 3/7	Islay	0	7	0	7	1
	0	4	4	8	1 1/7	4,914	702	Entrance of Clyde	0	1	1	2	0 2/7
	2	1	10	13	1 6/7	4,970	710	Mull of Cantyre	0	0	3	3	0 3/7
	0	1	2	3	0 3/7	5,210	744 2/7	Ballycastle	0	0	0	0	0
	3	11	15	29	4 1/7	20,150	2,878 4/7	Fair Head Glenarm Bay Larne	4	0	0	4	0 4/7
	4	23	64	91	13	149,418	21,345 3/7	Belfast Groomsport Copeland Island Donaghadee Ballyferris Point Cloughy Bay	0	13	6	19	2 5/7
	10	72	142	224	32	264,198	37,742 4/7		4	29	10	43	6 1/7
Lough Strangford to Wicklow Head. * See Remarks.	1	6	12	19	2 5/7	12,169	1,738 3/7	Lough Strangford	0	4	0	4	0 4/7
	1	9	14	24	3 3/7	25,630	3,661 3/7	Ardglass Dundrum Bay	0	5	1	6	0 6/7
	1	3	11	15	2 1/7	5,510	787 1/7	Lough Carlingford	0	0	0	0	0
	0	6	4	10	1 3/7	2,440	348 4/7	Dundalk Clogher	0	1	0	1	0 1/7
	1	14	6	21	3	31,720	4,531 3/7	Drogheda	0	43	7	50	7 1/7
	6	25	46	77	11	55,584	7,940 4/7	Balbriggan Lambay Island* Ireland's Eye Howth Dublin Kish Bank Bray Head Wicklow	9	14	92	115	16 3/7*
	10	63	93	166	23 5/7	133,053	10,007 4/7		9	67	100	176	25 1/7
Wicklow Head to Carnsore Point.	3	10	35	48	6 6/7	99,710	14,244 2/7	Arklow Courtown Blackwater Bank	0	87†	25	112	16
	1	7	17	25	3 4/7	41,130	5,875 5/7	Wexford	0	9	5	14	2
	4	17	52	73	10 3/7	140,840	20,120		0	96	30	126	18
Carnsore Point to Head of Kinsale.	10	14	28	52	7 3/7	111,659	15,951 2/7	Tuskar Rock Carnsore Point Ballyteigue Bay Saltees	4	30	7	41	5 6/7
	3	13	18	34	4 6/7	120,341	17,191 4/7	Waterford	0	12	13	25	3 4/7
	5	63	56	124	17 5/7	131,200	18,742 6/7	Dungarvan Ardmore Youghal Ballycotton Bay Cork At sea	1	17	0	18	2 4/7
	13	90	102	210	30	363,200	51,885 5/7		5	59	20	84	12
	42	242	339	673	96 1/7	901,291	128,755 6/7	General Total	18	251	160	429	61 2/7
								* *Tayleur*, lost January 1854 on Lambay Island	-	290	-	290	-
									18	541	160	719	101 5/7

Remarks.—Buoys and small harbour lights are very much required at Lochandail in Islay, in order to enable small vessels to take full advantage of the inner anchorage, where, even if the vessels go on shore, both life and vessels are always saved.

Appendix. Deposition taken at Lochandail before Chairman.

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† Of this number, 72 lives were lost, being part of the passengers and crew of the American ship *Mobile*, wrecked on Arklow Bank.

The loss of 290 lives in the *Tayleur* on Lambay Island in January 1854 has been shown both included and excluded from the above return, being, to a certain extent, exceptional. She was lost under circumstances which are well known to have been entirely independent of the want of a harbour of refuge on the coast, and, therefore, the average in which her loss is not included, is probably a fairer representation of the annual loss on the coast to be provided for, than that, in which the number of lives lost on that occasion is included.

The loss in the small district of coast between Wicklow Head and Carnsore Point is heavy, and affords much reason to regret that the improvement to the entrance to Wexford Harbour is a matter of such difficulty, though it is one which should not be lost sight of.

It will be observed that the number of disabled vessels running into Cork Harbour is large, and that the loss of life is comparatively small, a strong argument in favour of harbours of refuge generally, and of the improvement of Waterford Harbour in particular.

ISLE OF MAN.

Districts.	Casualties during 7 Years from 1850-57, excluding 1855.							Ports and Sections of Coast.	Lives Lost during 7 Years from 1850-57, excluding 1855.				
	From Foundering.	From Wrecks occasioned by		Vessels.		Approximate Value.							
		Stress of Weather.	All other Causes.	Total Lost.	Annual Average	Total.	Annual Average		From Foundering.	From Stress of Weather.	All other Causes.	Total.	Annual Average
						£	£						
Eastern Coast.	2	11	22	35	5	15,870	2,267 1/7	Ramsay Bay - -	1	0	7	8	1 1/7
	0	2	9	11	1 4/7	3,734	533 3/7	Douglas Bay - -	0	0	0	0	0
	9	1	17	27	3 6/7	18,972	2,710 2/7	Douglas to Port Mary - -	2	5	36	43	6 1/7
Western Coast.	1	2	3	6	0 6/7	11,750	1,678 4/7	Peel - - -	9	11	2	22	3 1/7
	0	2	1	3	0 3/7	1,300	185 5/7	Peel to Point of Ayr -	0	5	0	5	0 5/7
	12	18	52	82	11 5/7	51,626	7,375 1/7	General Total	12	21	45	78	11 1/7

BRISTOL CHANNEL.

DISTRICTS.	Casualties during 7 Years from 1850-57, excluding 1855.							Ports and Sections of Coast.	Lives Lost during 7 Years from 1850-57, excluding 1855.				
	From Foundering.	From Wrecks occasioned by		Vessels.		Approximate Value.							
		Stress of Weather.	All other Causes.	Total Lost.	Annual Average	Total.	Annual Average		From Foundering.	From Stress of Weather.	All other Causes.	Total.	Annual Average
MILFORD HAVEN and CARMARTHEN BAY.	4	5	14	23	3 2/7	£ 7,720	£ 1,102 6/7	West of Milford -	8	5	1	14	2
	2	22	34	58	8 2/7	84,450	12,064 2/7	Milford - -	0	39	2	41	5 6/7
	4	7	8	19	2 5/7	74,660	10,665 5/7	St. Gowan's Head Tenby - - - Caldy - - Saunderfoot -	0	8	0	8	1 1/7
	0	14	10	24	3 3/7	28,160	4,022 6/7	Carmarthen Bay -	0	23	0	23	3 2/7
	10	48	66	124	17 5/7	194,990	27,855 5/7		8	75	3	86	12 2/7
BRISTOL CHANNEL PROPER,	4	1	0	5	0 5/7	2,520	360	Worms Head - Helwick Point -	0	0	0	0	0
	0	1	4	5	0 5/7	11,100	1,585 5/7	Port Einon - - Oxwich Bay -	0	0	7	7	1
	7	23	40	70	10	24,434	3,490 4/7	Mumbles - - Swansea Bay -	3	0	8	11	1 4/7
	0	3	11	14	2	6,730	961 3/7	Porthcawle - -	3	4	9	16	2 2/7
	6	5	23	34	4 6/7	22,875	3,267 6/7	Nash Point - - Breaksea Point - Lavernock Point - The Holmes - -	8	2	0	10	1 3/7
	6	7	35	48	6 6/7	31,760	4,537 1/7	Cardiff - - -	4	5	5	14	2
	23	40	113	176	25 1/7	99,419	14,202 5/7		18	11	29	58	8 2/7
	3	2	10	15	2 1/7	4,000	571 3/7	North side of Channel - -	0	0	5	5	0 5/7
	12	8	36	56	8	25,300	3,614 2/7	South side of Channel - - Bristol - - Bridgewater - Combmartin -	5	0	3	8	1 1/7
	15	10	46	71	10 1/7	29,300	4,185 5/7		5	0	8	13	1 6/7
HARTLAND POINT to LAND'S END.	4	10	34	48	6 6/7	23,790	3,398 4/7	Ilfracombe - - Barnstaple Bay -	0	12	6	18	2 4/7
	9	8	28	45	6 3/7	22,130	3,161 3/7	Lundy Island - Bude Haven - Boscastle - - Port Isaac -	6	10	15	31	4 3/7
	2	11	13	26	3 5/7	10,585	1,512 1/7	Padstow - -	0	12	0	12	1 5/7
	1	5	5	11	1 4/7	8,450	1,207 1/7	Trevose Head -	1	8	0	9	1 2/7
	0	4	7	11	1 4/7	7,905	1,129 2/7	New Quay - St. Agnes - Portreath -	0	47	0	47	6 5/7
	5	11	16	32	4 4/7	13,375	1,910 5/7	St. Ives - -	3	12	0	15	2 1/7
	17	39	69	125	17 6/7	62,445	8,920 5/7		10	89	15	114	16 2/7
LAND'S END and SCILLY ISLANDS.	7	9	16	32	4 4/7	18,242	2,606	Land's End -	5	5	20	30	4 2/7
	10	17	36	63	9	70,935	10,133 4/7	Scilly Islands -	0	18	3	21	3
	17	26	52	95	13 4/7	89,177	12,739 4/7		5	23	23	51	7 2/7
	86	173	380	639	91 2/7	499,121	71,303	General Total -	46	210	84	340	48 4/7

Remarks.—The serious character of the losses in the neighbourhood of Milford and Carmarthen Bay will not fail to draw attention. They result chiefly from the large passing traffic of the Irish Channel, and from the peculiarly dangerous character of that district of the coast, also from bad land falls made during thick and heavy weather by vessels on their homeward voyage, and the difficulty of getting off the coast if once in with it in weather of that description.

The losses in the Bristol Channel proper, call for no remark. With the large traffic belonging to it, it is little likely that they will ever be fewer in number, or that any new harbours whatever would effect a change in that respect.

Between Hartland Point and the Land's End it will be observed the case is far otherwise, and there is every reason to hope that the measures recommended by the Commissioners will be the means of preventing some of the heavy losses which takes place in that district and the neighbourhood of the Land's End.

EAST COAST OF ENGLAND.

Districts.	Casualties during 7 Years from 1850–57, excluding 1855.							Ports and Sections of Coast.	Lives Lost during 7 Years from 1850–57, excluding 1855.				
	From Foundering.	From Wrecks occasioned by		Vessels.		Approximate Value.			From Foundering.	From Stress of Weather.	All other Causes.	Total.	Annual Average
		Stress of Weather.	All other Causes.	Total Lost.	Annual Average	Total.	Annual Average						
						£	£						
Exterior to the	1	12	32	45	6 3/7	19,600	2,800	Berwick Holy Island	8	21	6	35	5
Farn Islands to Souter Point.	7	5	15	27	3 6/7	14,830	2,118 4/7	Farn Islands	0	22	0	22	3 1/7
	1	11	23	35	5	18,230	2,604 2/7	Bamborough North Sunderland Boulmer Alnmouth Warkworth	8	5	0	13	1 6/7
	0	10	2	12	1 5/7	10,695	1,527 6/7	Amble	0	0	0	0	0
	1	1	9	20	2 6/7	7,708	1,101 1/7	Coquet Island Hauxley Bondicar Cresswell Newbiggen	0	22	0	22	3 1/7
	1	7	14	22	3 1/7	8,046	1,149 3/7	Blyth	0	20	0	20	2 6/7
	9	25	155	189	27	112,787	16,112 3/7	Shields	8	35	14	57	8 1/7
	0	6	7	13	1 6/7	5,910	844 2/7	Souter Point Whitburn Steel	0	10	0	10	1 3/7
	19	74	225	318	45 3/7	178,206	25,458		16	114	14	144	20 4/7
Sunderland.	2	57	79	138	19 5/7	92,311	13,187 2/7	Sunderland	1	44	1	46	6 4/7
Sunderland to Whitby Rock.	0	3	0	3	0 3/7	2,200	314 2/7	Ryhope	0	0	0	0	0
	1	5	11	17	2 3/7	5,129	732 5/7	Seaham	0	0	0	0	0
	0	5	2	7	1	4,260	608 4/7	Seaham to Hartlepool	0	1	0	1	0 1/7
	13	64	66	143	20 3/7	87,714	12,530 4/7	Hartlepool	37	44	10	91	13
	3	13	21	37	5 2/7	17,409	2,487	Seaton Carew Tees	7	13	6	26	3 5/7
	2	22	45	69	9 6/7	31,149	4,449 6/7	Coatham Redcar Marske Huntcliffe Skiningrove	2	12	5	19	2 5/7
	2	2	2	6	0 6/7	3,115	445	Runswick Bay	0	28	0	28	4
	21	114	147	282	40 2/7	150,976	21,568		46	98	21	165	23 4/7
Whitby Rock to Flamborough Head.	11	16	61	88	12 4/7	41,250	5,892 6/7	Whitby	7	13	16	36	5 1/7
	4	4	9	17	2 3/7	8,165	1,166 3/7	Robin Hood's Bay	0	8	1	9	1 2/7
	2	11	21	34	4 6/7	15,410	2,201 3/7	Scarborough	0	6	0	6	0 6/7
	4	10	10	24	3 3/7	9,840	1,405 5/7	Filey	15	0	0	15	2 1/7
	22	35	50	107	15 2/7	93,480	13,354 2/7	Flamborough Head	1	26	10	37	5 2/7
	43	76	151	270	38 4/7	168,145	24,020 5/7		23	53	27	103	14 5/7
	86	333	634	1,053	150 3/7	609,238	87,024	General Total	94	330	69	493	70 3/7

Remarks.—The section of coast from Holy Island to Berwick belongs to the district to the north, the line of embayment of which runs from Rattray Head to the Farn Islands.

The large number of vessels lost at the entrance and in the vicinity of the principal ports clearly indicates the unsafe character of the access to them, and the mode in which these losses occur.

The number of vessels that founder corroborates the notorious facts alluded to in Captain Bedford's report, Appendix No. , relative to the state in which the colliers are too frequently sent to sea; attention cannot be too strongly drawn to these circumstances.

TABLE, showing the Casualties arising from Two remarkable Gales of Wind, one in January 1854, and one in January 1857.

Vessels Lost.						Total.	District.	Lives Lost.						Total.	Number of Vessels that ran in for Shelter.		
Light.			Laden.					Light.			Laden.						
1854	1857	Total.	1854	1857	Total.			1854	1857	Total.	1854	1857	Total.		1854	1857	Total.
0	0	0	2	0	2	2	Berwick Holy Island	0	0	0	1	0	1	1			
0	1	1	0	1	1	2	Farn Islands	0	0	0	0	0	0	0			
3	1	4	1	2	3	7	Bamborough North Sunderland Boulmer Alumouth Warkworth	0	0	0	0	9	9	9			
1	1	2	1	4	5	7	Amble	4	0	4	0	7	7	11			
4	0	4	5	0	5	9	Coquet Island Hauxley Bondicar Cresswell Newbiggen	0	0	0	5	0	5	5			
0	0	0	0	0	0	0	Blyth	0	0	0	0	0	0	0			
6	2	8	8	2	10	18	Shields	8	1	9	1	9	10	19	161	36	197
0	0	0	0	0	0	0	Souter Point Whitburn Steel	0	0	0	0	0	0	0			
14	5	19	15	9	24	43		12	1	13	6	25	31	44	161	36	197
12	2	14	3	1	4	18	Sunderland	0	0	0	0	0	0	0	144	0	144
0	0	0	0	0	0	0	Ryhope	0	0	0	0	0	0	0			
0	0	0	0	0	0	0	Seaham	0	0	0	0	0	0	0			
0	4	4	0	0	0	4	Seaham to Hartlepool	0	1	1	0	0	0	1	0	33	33
13	14	27	11	2	13	40	Hartlepool	0	22	22	9	5	14	36	175	58	233
1	3	4	0	2	2	6	Seaton Carew Tees	0	0	0	0	7	7	7	26	1	27
0	2	2	0	2	2	4	Coatham Redcar Marske Huntcliffe Skiningrove	0	0	0	0	4	4	4			
0	0	0	0	2	2	2	Runswick Bay	0	0	0	0	14	14	14			
14	23	37	11	8	19	56		0	23	23	9	30	39	62	201	92	293
0	6	6	1	0	1	7	Whitby	0	0	0	0	0	0	0			
0	2	2	0	0	0	2	Robin Hood's Bay	0	4	4	0	0	0	4			
1	4	5	0	2	2	7	Scarborough	0	0	0	0	5	5	5	3	4	7
0	1	1	0	1	1	2	Filey	0	0	0	0	0	0	0			
0	1	1	2	0	2	3	Flamborough Head	0	0	0	0	0	0	0			
1	14	15	3	3	6	21		0	4	4	0	5	5	9	3	4	7
41	44	85	34	21	55	140	General Total	12	28	40	16	60	76	116	509	132	641

General Abstract.	1854			1857			Total.
	Light.	Laden.	Total.	Light.	Laden.	Total.	
Vessels Lost	41	34	75	44	21	65	140
Approximate Value	£ 23,532	£ 30,495	£ 54,027	£ 35,464	£ 21,311	£ 56,775	£ 110,802
Lives Lost	12	16	28	28	60	88	116

REMARKS.—The returns obtained were incomplete as respects the number of vessels that ran in for shelter.

It will be observed, that the ratio of the loss of laden to light vessels is as 1to 1·54, while that of lives lost in laden to those lost in light vessels is as 1·9 to 1; therefore, for every three lives lost out of light, four were lost from laden vessels.

The largest loss both of vessels and life took place at Hartlepool, for which place also the largest number of vessels ran for shelter.

At the Tyne the loss of life was considerable, though the number of vessels lost was comparatively small in proportion to the number that ran for shelter. At Sunderland, the case was reversed, the number of vessels lost was comparatively high, and no lives were lost.

APPENDIX, No. 1.—PART IV.—ABSTRACTS COMPILED FROM LOCAL RETURNS.

TABLES compiled from the Returns furnished at the several Ports.

Note.—The Blanks in the Columns arise from the Returns having been imperfect as respects the Information under the several Headings.

AVERAGE ANNUAL LOSS of LIFE and NUMBER of CASUALTIES on the NORTH-EAST COAST of ENGLAND, compiled from the RETURNS furnished at the several Ports.

Years.	Number.	Port.	Life lost. From Laden Ships.	Life lost. From Light Ships.	Life lost. Total.	Vessels. Wrecked. Tonnage.	Wrecked. Laden.	Wrecked. Light.	Wrecked. Total.	Stranded. Tonnage.	Stranded. Laden.	Stranded. Light.	Stranded. Total.	Total. Tonnage.	Total. Laden.	Total. Light.	Total. Number.	Remarks.
1847–57	11	Hartlepool	3 8/11	4 4/11	8 1/11	928	3 4/11	2 10/11	6 3/11	2586 1/11	4 8/11	10 4/11	15 1/11	3514 1/11	8 1/11	13 3/11	21 4/11	
1852–57	6	Sunderland												2268¾	584¼	1684½	13	
1825–57	33	Redcar {From Tees Mouth / To Staithes}	3	1 7/33	4 7/33										4 31/33	5 11/33	10 28/33	
1839–57	19	Tees Mouth							0 11/19				0 11/19				1 11/19	
1850–57	8	Between {Runswick Bay and Robin Hood's Bay}															6	
1852–54	3	Robin Hood's Bay and to Farn Islands													45	47	92	

CASUALTIES with the Wind at various Points.

Years.	Number.	Port.	Casualties with the Wind North.	East.	South.	West.	East to North.	East to South.	West to North.	West to South.	Not Recorded.	Total.
1825–57	33	Redcar {From Tees Mouth / To Staithes}	0 11/33	0 8/33	0 11/33	0 7/33	3 11/33	0 27/33	0 11/33	2 9/33	1 5/33	10 28/33
1852–54	3	Robin Hood's Bay to Farn Islands	0	0	0	0	34⅓	45⅓	7⅓	5	Foundered at Sea, 12⅓	92
1852–57	6	Sunderland	0	2½	0	0	2½	8	0	0	0	13

ANNUAL AVERAGE LOSS of LIFE and NUMBER of CASUALTIES at the PORTS named, distinguishing those occurring to Vessels belonging to the Port.

Years.	Number.	Port.	North of Laden.	North of Light.	North of Total.	North of Lives.	At the Laden.	At the Light.	At the Total.	At the Lives.	South of Laden.	South of Light.	South of Total.	South of Lives.	Foreign Laden.	Foreign Light.	Foreign Total.	Foreign Lives.	Total. Vessels.	Total. Lives.
1852–54	3	Vessels from Tyne	4⅔	0⅓	5		6	0⅓	6⅓		3	0	3							
		Vessels to Tyne	2⅓	1⅓	3⅔		5	9	14		0	3	3							
		Total	7	1⅔	8⅔		11	9⅓	20⅓		3	3	6						35	
1847–57	11	Hartlepool			8 7/11	4 4/11			1 4/11	0 9/11			9 3/11	2 7/11			1 7/11	0 4/11	20 10/11	8 4/11

TRAFFIC and CASUALTIES for the Year 1856 on the NORTH-EAST COAST of ENGLAND.

Year.	Port.	Annual. Traffic.	Annual. Wrecks.	Year.	Port.	Annual. Traffic.	Annual. Wrecks.
					Brought forward	36,262 Vessels	46⅔ Vessels.
1856	Humber	22,000 Vessels	16 Vessels.	1856	Hartlepool	19,066 „	20⅔ „
„	Bridlington	3,760 „	10⅓ „	„	Seaham	4,019 „	3⅔ „
„	Scarborough	639 „	4⅓ „	„	Sunderland	18,794 „	19⅔ „
„	Whitby	3,508 „	7⅓ „	„	Port of Tyne	45,000 „	24 „
„	Redcar	—	6⅔ „	„	Blyth	2,370 „	4⅓ „
„	Tees	6,355 „	2⅔ „	„	Warkworth	4,164 „	—
	Total	32,262 „	46⅔ „		Total	129,675 „	118⅔

An Abstract of the Loss of Life by Wreck, distinguishing between Laden and Light Vessels, showing the proportion of each, between the Farn Islands and Flamborough Head, for the Years 1852, 1853, and 1854, from the Admiralty Wreck Register.

Year.	Between Farn Islands and Flamborough Head.				On other parts of the Coasts of the United Kingdom.				Total of Life lost by Wrecks on the coasts of the United Kingdom.			
	In Light Vessels.	In Laden Vessels.	Not stated whether laden or light.	Total.	In Light Vessels.	In Laden Vessels.	Not stated whether laden or light.	Total.	In Light Vessels.	In Laden Vessels.	Not stated whether Laden or Light.	Total.
1852	9	63.	23	95	—	400	45	445	9	463	68	540
1853	—	13	1	14	9	597	125	731	9	610	126	745
1854	15	62	19	96	28	567	90	685	43	629	109	781

N.B. This abstract does not include the loss of life by cases of collision, (or in vessels foundering at sea with an off-shore wind, or in vessels towing in or out of harbour by steamers.

An Abstract of Casualties which have occurred between Kinnaird's Head and Girdleness, north-east coast of Scotland, from 1816 to 1822, and from 1828 to 1858.

Note.—No List was kept from 1822 to 1828.

	Miles of Coast.	Lives lost.	Vessels lost.
Between Kinnard's Head and Rattray Head - - -	8	Unknown.	6
Between Rattray Head and Buchan Ness, including the south bay of Peterhead -	10	49	133
Between Buchan Ness and Scares of Cruden - -	5	Unknown.	3
Between Scares of Cruden and Girdleness - -	17	4	17

Returns of the Number of Vessels taking Refuge in the Harbours of Holyhead, Kingstown, and Portland, from 1850–58.

Portland Harbour of Refuge.

Monthly Return of Vessels taking Refuge in the Harbour from the commencement of the Year 1855 to the end of 1858.

Month.	For the Year 1855.	For the Year 1856.	For the Year 1857.	For the Year 1858.	Remarks.
January - -	54	46	92	70	The men-of-war steam ships, gun boats, and mortar boats which entered the harbour for shelter (included in this return) were— 7 in 1855, 18 in 1856, 4 in 1857, and 12 in 1858.
February -	42	15	21	56	
March - -	98	39	103	35	
April - -	63	55	55	73	
May - -	44	88	25	71	
June - -	27	150	34	6	
July - -	69	75	53	27	
August -	71	59	38	40	
September -	19	65	27	144	
October -	74	49	74	100	
November -	30	57	49	93	
December -	37	70	99	100	
	628	768	670	815	

John Hales, Master R.N.,
Harbour-master.

19 Dec. 1858.

Note.—This return does not include vessels coming into the new harbour "stopping a tide;" of these there are a great number in the course of the year.

Portland Harbour of Refuge.

Memorandum relative to Vessels using the Harbour for Shelter.

In 1858 there were—

54 days with from 20 to 40 vessels, extending over each month in the year, excepting June and July.

16 days with from 40 to 60 vessels, at various times during the months of April, September, and November.

8 days with from 60 to 80 vessels, during September and October.

In 1859, during the *whole period* from 17th to 31st January, there were—

From 50 to 60 vessels sheltering in the harbour.

98 vessels were in the harbour for shelter on Wednesday, 2d February.

88 of these sailed on Thursday, 3d February.

52 vessels came in for shelter on Friday, 4th February.

This number has increased up to 73 at the present time.

John Hales, Master R.N.,
Harbour-master.

Portland,
February 10, 1859.

Holyhead Harbour of Refuge.

Monthly Return of the Vessels taking Refuge in the New Harbour of Holyhead from the commencement of the Year 1855 to the present date, 10th December 1858.

Month.	1855.	1856.	1857.	1858.	Monthly.
January - -	119	151	194	362	826
February -	130	214	318	325	987
March - -	139	259	424	166	988
April -	49	182	371	310	912
May - -	143	211	159	259	772
June -	93	180	167	144	584
July - -	59	170	234	268	731
August -	167	183	202	198	750
September -	194	266	199	347	1,006
October -	155	329	340	243	1,067
November -	157	162	256	211	786
December -	203	216	293	105	817
Yearly - -	1,608	2,523	3,157	2,938	10,226 Total.

Ben. P. Priest, Commander R.N.,
Conducting Packet Service, and
Harbour-master.

Admiralty Office, Holyhead,
10th February 1859.

Sir,

There are 218 vessels anchored in the New Harbour at present; of these there are 194 inside the Platters and 24 outside. The majority sailed with a large fleet from Liverpool on the 8th inst., having the wind from the eastward. When the wind shifted to south and south-south-west many of them anchored under the lee of Anglesey about Redwharf; those which had got well down Channel bore up for this port when they found the wind increasing. Many are still arriving.

On 9th Jan. 1858 we had 216 vessels in the New Harbour under similar circumstances.

Under certain circumstances a south-easterly wind fills this harbour, but the above instances will best exemplify the usual mode by which a large fleet is collected here.

I shall be happy to amplify this information if the above is not sufficient for the purposes of the Commissioners.

I have, &c.
(Signed) Ben. P. Priest, Commander R.N.,
Conducting Packet Service, and
Harbour-master.

Fred. Jno. Evans, Esq.,
Secretary to the Harbour of Refuge Commission.

RETURNS of the NUMBER of VESSELS TAKING REFUGE in the Harbours of PORTLAND, HOLYHEAD, and KINGSTOWN, from 1850–58.

KINGSTOWN HARBOUR OF REFUGE.

MONTHLY RETURN of the VESSELS TAKING REFUGE in the Harbour of KINGSTOWN from the Year 1850 (not from or bound to Dublin).

—	January.		February.		March.		—	July.		August.		September.	
	No.	Tons.	No.	Tons.	No.	Tons.		No.	Tons.	No.	Tons.	No.	Tons.
1850 -	73	7,058	70	7,000	69	6,345	1850 -	33	2,567	34	2,200	51	4,069
1851 -	72	7,303	81	7,363	65	5,683	1851 -	29	2,846	35	3,442	52	4,724
1852 -	86	8,555	82	8,219	87	6,368	1852 -	34	3,480	41	3,539	91	8,303
1853 -	105	10,548	56	6,379	55	3,678	1853 -	58	5,395	58	5,000	70	7,072
1854 -	60	6,606	67	8,019	73	7,346	1854 -	52	4,348	36	2,672	52	3,629
1855 -	75	6,150	43	4,642	67	5,870	1855 -	20	1,914	46	3,499	50	4,000
1856 -	72	4,992	71	4,992	76	5,708	1856 -	44	3,102	40	3,100	56	5,269
1857 -	121	9,832	83	7,229	119	10,106	1857 -	40	3,208	30	2,050	60	4,585
1858 -	71	7,339	50	6,459	80	8,009	1858 -	40	3,000	40	2,936	70	6,565
—	735	—	603	—	691	—	—	350	—	360	—	552	—

—	April.		May.		June.		—	October.		November.		December.	
	No.	Tons.	No.	Tons.	No.	Tons.		No.	Tons.	No.	Tons.	No.	Tons.
1850 -	40	3,000	40	3,729	36	3,000	1850 -	32	2,679	80	8,100	63	7,307
1851 -	49	4,028	37	2,691	39	2,867	1851 -	88	7,835	49	5,082	88	8,290
1852 -	65	5,951	64	5,514	65	5,001	1852 -	85	8,939	71	8,166	54	6,248
1853 -	71	5,131	68	5,866	51	3,809	1853 -	78	7,000	48	5,100	90	9,994
1854 -	53	3,421	36	2,858	67	4,845	1854 -	87	8,258	56	4,744	29	2,655
1855 -	70	5,718	70	6,000	27	2,000	1855 -	75	5,651	65	4,421	67	6,328
1856 -	76	5,708	47	3,324	46	3,324	1856 -	91	6,754	50	4,245	51	4,284
1857 -	100	8,000	55	3,173	50	3,000	1857 -	71	4,070	58	5,000	50	5,119
1858 -	63	6,500	40	3,551	33	2,300	1858 -	62	4,035	67	6,018	67	6,218
—	587	—	457	—	414	—	—	669	—	544	—	559	—

Years.	Total.
—	—
1850 - - - -	621
1851 - - - -	684
1852 - - - -	825
1853 - - - -	808
1854 - - - -	668
1855 - - - -	675
1856 - - - -	720
1857 - - - -	837
1858 - - - -	683
	6,521

WM. HUTCHISON, Lieut. R.N.,
Harbour-master.

Kingstown,
SIR, 10th February 1859.

I BEG leave to state, in reply to your letter of the 5th inst., written by direction of the Harbour of Refuge Commissioners, that, on referring to the register of vessels entering this harbour during several years, I cannot fix on any particular day that I could state a striking example of a large number of vessels being congregated in this harbour. On this day the wind is now south, and has been veering from that point to west since the 1st inst.; we have now wind-bound vessels, one barque, seven brigs, sixty schooners, eighteen sloops; and the greatest number that I have ever observed taking shelter in those winds was one hundred and fifty.

With east-south-east gales the description of vessel seeking shelter are homeward-bound vessels from foreign ports unable to make Liverpool and Glasgow; these vessels are not numerous, but large ships and brigs. This harbour is then a real refuge from those gales; but I beg to remark, with easterly gales the position vessels have to take up is quite different from that with south gales; all parts of the harbour are equally safe with the latter wind; whereas the north-west side of the harbour is unsafe in the former wind, and cannot be occupied as it is with south and south-west winds. The west pier requires extension in a south direction to shelter the vessels caught by an easterly gale on that side, which has caused several wrecks at different times, and will in future, until the extension recommended by me to the Lords Commissioners of the Admiralty in 1833 is undertaken.

I have, &c.
(Signed) WM. HUTCHISON, Lieut. R.N.,
Harbour-master.

Fred. Jno. Evans, Esq.
&c. &c.

APPENDIX, No. 2.

Pulteney Town,
August 25th 1858.

Sir,

In accordance with our conversation this morning, I now take the liberty of stating in writing for the information of the Refuge Harbour Commission, the views entertained by the British Fishery Society on the question of extended harbour accommodation in Wick Bay.

In order to obviate any mistaken impression as to the motives that guide the action of the society, or that prompt the suggestions which, on its behalf, I now venture to submit to the Commission, it will be desirable for me to remark, that its character and purpose seem to have been somewhat misapprehended, judging from the terms of official reports occasionally made by the Admiralty to Parliament. The British Fishery Society is certainly, in point of fact, a private joint stock company, but it was not established for the ends that such companies usually have in view. It consisted of an association of gentlemen, formed, towards the end of the last century, for the purpose of promoting and aiding the industry of the sea-coast population of Scotland; and it was incorporated by Act of Parliament in order to give greater efficiency to its operations, the proprietors have almost entirely foregone any division of profits, and have, instead, devoted their income to the maintenance of their works, or to accumulation, with a view to their extension. They originally possessed four settlements, one at Ullapool on the western coast of Ross-shire, one at Tobermory in Argyleshire, one at Loch bay in Inverness-shire, and one at Pulteney Town on the eastern coast of Caithness. The last is the only one they retain, the others have been from time to time disposed of in consequence of their failing to fulfil the purposes for which they were entered upon.

The society still possesses, however, the pier at Tobermory.

The success of the establishment at Pulteney Town has been equal to the fullest expectations of the society, the original, or inner harbour, was completed by them about the year 1807 or 1808. The second, or outer harbour, was finished (after considerable interruption to the works by storms) in the year 1834. The industry created and fostered by these harbours has now vastly outgrown the accommodation they are capable of affording, both as regards the extent of this industry and the capacity of the vessels which it employs.

The superficial area measured in acres, of the boats alone engaged in the fisheries, exceeds the superficial area of both harbours, being, I believe, as 15½ acres to 12½ acres; and yet, the harbour has necessarily to receive a large number of foreign and coasting vessels, there being occasionally during the fishing as many as 80 to 90 at the same time in the harbour, occupying, as much as 5½ acres out of the 12½. Yesterday there were 66 in the harbours, and as many as 22 in the bay unable to obtain admission. This is a state of things inconvenient to the last degree, under any circumstances, but it is fraught with the utmost peril to life and property, when easterly storms arise, a not unfrequent occurrence on this coast. It also materially diminishes the productiveness of the fishery, for, with no better refuge to run for than an insufficient tidal harbour, the boats often hesitate to put to sea at all; or, if at sea, they invariably abandon the fishing ground in panic, if bad weather threatens, whereas with good shelter under their lee, they would not hesitate to rough it out, and thus secure opportunities of harvest they now lose.

Sensible of these evils, the British Fishery Society have for a length of time directed their anxious attention to the means of providing a remedy; various plans of harbour extension have been prepared by eminent engineers; but they have been left unattempted, either because they fell short of the requirements of the case, or, being sufficient, they greatly exceeded the means at the society's command. At length, no other course being open to them, the directors two years ago addressed the government on the subject, pressing for a grant of public money to aid their own funds, the result of this application was the appointment of the late Committee of the House of Commons on Harbours of Refuge, whose report contained the recommendation from which the present Royal Commission originated. Simultaneously with these efforts the society employed itself in obtaining from Parliament, powers to construct the utmost amount of harbour extension attainable by their own means, so as to be armed with an alternative in the event of their failing to obtain assistance from the public.

The question therefore which presents itself to the Commissioners, is, whether the circumstances of the case are such as to justify them in recommending the application of a grant of public money to the construction of an extensive and effectual work in Wick Bay, or, whether, it shall be left to the society to carry their authorized plan into effect.

The society have hitherto suspended the exercise of their powers waiting to see what course would be taken on the part of the public, but the perils which annually beset a multitude of lives impress them with so strong a feeling of apprehension and responsibility, that they will immediately proceed to effect all that they have authority to do for the alleviation of these dangers, in case the Commission or Parliament decline to entertain a more comprehensive scheme. In stating this intention, however, on the part of the Society, it is right to add that they are painfully aware of the inadequacy of their own plan; it was adopted, not because it was all that could be wished, but because it was all that the society have the means of accomplishing. It would, in some degree, improve the condition of things that exists, but it would by no means afford complete accommodation either to local or to general wants, while, in addition (and this merits the serious attention of the Commissioners) it would materially interfere with, if indeed it would not prevent, any subsequent construction of a larger work, inasmuch as it would occupy the best anchorage ground in the bay.

I do not take the liberty of pointing out to the Commissioners, the reasons that suggest themselves in support of the larger plan recommended, viz., of establishing in Wick Bay a place of refuge for the shipping frequenting these seas, or, if need be, for a naval station. They appear to me to possess irresistable weight, but it would be taking a liberty on my part were I to present topics to the attention of the Commissioners of which they must be already fully aware, and of which they are better able than I am, to appreciate the importance. As regards arguments founded on grounds of local necessity, I need do no more than point to the present crowded condition of our harbour, and of the bay, for unanswerable proof that something must be done, and that immediately.

The works which the society last year obtained powers to constuct, are estimated to cost from 45,000*l.* to 50,000*l.* The expenditure of this sum would consume all the funds at the command of the society, but the construction of these works would confer on it the power of levying an increased scale of rates, and thus of adding to its revenue. This power would not accrue, were any other plan of works to be adopted. The society however cannot hesitate in giving preference to the larger and more comprehensive scheme; and were the Commission, to decide on recommending its adoption, on the scale and in the direction that has been last suggested by Capt. Vetch, the society will be prepared to contribute towards it the sum of 25,000*l.* looking for no higher interest than that amount as now invested yields, say 3½ per cent., to be derived frym an anchorage rate, or in any other way that may on consideration be preferred.

I observe in the report made by the committee which last session considered this question, an expression which, if left unnoticed, may lead to misapprehension. At page vi, after stating that the British Fishery society have it in contemplation to spend 45,000*l.* on enlarging the present harbour of Wick, the Report (at line 25 from the top of the page) goes on to say, "It is understood that the Fishery Society is "ready to apply the sum at their command towards this "large work, in place of expending it on the smaller work "contemplated." This paragraph implies that the society is ready to apply 45,000*l.* towards the larger work, which is a mistake, nor can I explain how it arose, for, in the communications which have at any time passed on the subject, the sum of 25,000*l.* was always named as the amount which the society would be able and willing to contribute.

To this correction of the paragraph quoted above, it is right to add the following observation,—If events so turn out as to require that the society shall construct their own work, it will cost them 45,000*l.*; but they will obtain for this outlay, accommodation, so far as it goes, fit for immediate use by fishermen, curers, and other traders, and demanding no further expenditure of magnitude, at the same time that they will be placed in a position to levy a considerable increase of revenue.

But it will be very different if the great breakwater be adopted, that work will not, in itself, create any appliances for conducting business. If constructed, it would still be necessary for the society to erect inner works, quays, wharves, &c. for the use of the public, requiring the appropriation of a large sum of money for the purpose. It would therefore be incautious on the part of the society to deprive themselves of the means of providing this inner accommodation, the cost of which will not be less than 15,000*l.* or 20,000*l.*

Adding this sum to the 25,000*l.* which the society is prepared to advance if required, to meet the first year's expenditure on the breakwater, we shall in fact arrive at the amount spoken of in the report. At the same time that the society will deprive itself of the power of levying increased dues, and with a view to promoting a great public improvement, will have advanced all its immediately available money on imperfect security at a rate of interest hardly above that yielded by the public funds.

I beg to apologize for the unexpected length of this communication.

I have, &c.
G. Loch,
Deputy Governor of the British Fishery Society.

To Admiral Hope, C.B.,
Chairman of the Royal Commission
on Harbours of Refuge.

APPENDIX, No. 3.

List of Vessels at Anchor in Wick Bay, from 17th to 24th August 1858, intending to enter Pulteney Harbour, but prevented by the Harbour-master serving each Vessel with a Notice "not to attempt to enter until others had "sailed, and in their turn Room would be made for them, "there being no open Water to receive them."

The following list will show that 6 vessels left the bay in consequence of these orders, 24 waited until room was made, and 10 came in without a pilot and against the harbour-master's orders, endangering the safety of boats and vessels, and blocking up the fairway.

Vessels leaving the bay on account of not getting admittance—

Smack	*Queen*	of Peel.
"	*Mary*	" Ramsey.
"	*Increase*	" Colchester.
Schooner	*Caledonia*	" Portsoy.
"	*Selberise*	" Stettin.
"	*Carolina*	" Stettin.

Vessels that waited until room was obtained—

Schooner	*Jessie*	of Dumfries.
"	*Agnes Kelly*	" Girvin.
Smack	*Susanna*	" Cowes.
Schooner	*Margaret and Jane*	" Barmouth.
"	*Caithness Shire*	" Thurso.
Smack	*Vulcan*	" Dublin.
"	*Diamond*	" Peel.
Schooner	*William*	" Douglas.
"	*Gode Hensight*	" Oesterrisoer.
"	*Arena*	" Christinsand.
"	*Ellen and George*	" Leith.
"	*Mary Rodgers*	" Queensferry.
"	*Mariana*	" Harburgh.
"	*Stag*	" Banff.
"	*Alert*	" Wick.
"	*Iris*	" Wick.
Smack	*Union*	" Peel.
Schooner	*Mary White*	" Girvin.
"	*Vixen*	" Yarmouth.
"	*Victoria*	" Krageroe.
"	*Ocean Bride*	" Aberdeen.
"	*Napoleon*	" Dundee.
Smack	*Mary Douglas*	" Broughead.
"	*Balaklava*	" Inverness.

Vessels entering against the harbour-master's orders—

Schooner	*Mather*	of Dundee.
Smack	*Adelaide*	" Wick.
Schooner	*Rover*	" Glasgow.
"	*Admiral Napier*	" Thurso.
"	*Britannia*	" Portsoy.
Smack	*Ann and Margaret*	" Stornoway.
Schooner	*Equity*	" Dumfries.
Smack	*John and Eliza*	" Portsoy
Schooner	*Enterprise*	" Spey.
"	*Stemster*	" Wick.

The foregoing statement is taken from the deputy harbour-master's return of vessels at anchor in the bay, from 17th to 24th August, and from my own books as collector of rates and dues on vessels entering the harbour.

William Crow,
John Tudor. Collector.

APPENDIX, No. 4.

Report to the Trustees of the Harbours of Peterhead, by Messrs. D. and T. Stevenson, Civil Engineers.

In pursuance of the desire of the Trustees to bring the subject of a Harbour of Refuge at Peterhead fully before the Committee of the House of Commons, which is expected to be appointed during the ensuing session of Parliament to consider harbours of refuge, we have been requested, by your Minute of 29th December, to consider the whole subject, and to prepare such plans and information as may be requisite, in order to show the full capabilities of the South Bay of Peterhead as a refuge station.

With reference to the engineering advantages which Peterhead presents, we have to refer to former reports, in which these points have been fully stated.

Our present object is, in terms of the instructions received, to show the capabilities of Peterhead Bay for the construction of a harbour on an extended and on a modified plan.

The designs which we proposed for the extension of the harbour in 1847, contemplated the construction of main piers having parapets and roadways, but as the object now sought to be attained is *sheltered area*, and not quay accommodation, we have carefully considered designs for covering piers or breakwaters, suited to Peterhead Bay, on the same principle as those for the harbour lately designed by us for Wick, and these designs we have now the pleasure to submit for the consideration of the Trustees.

The smaller or modified design consists in a short breakwater projected from the South Shore of the Keith Inch, and a more extended breakwater starting from the head of the bay and running out to meet the first-mentioned work, leaving an entrance between their extremities of 250 feet. These two moles enclose a low-water area of 86 acres in all, of which 44 acres have a depth of 12 feet and upwards, and 36 acres a depth of 18 feet and upwards at low-water of spring tides. The most costly part of this work is, the extension of the breakwater from the Keith Inch. From the comparatively sheltered position of the other part, it may be made at a proportionately lower cost. We estimate the whole work, including an allowance for incidents, varying from 10 to 20 per cent., at 210,000*l.*

There can be no doubt that this modified plan will afford all the accommodation that may be required for the coasting trade for a very long time to come, but it is desirable to show that, should Government contemplate establishing a harbour on a large scale, Peterhead Bay affords, in an engineering point of view, a very favourable site for such a work: we have therefore shown, on a separate plan, a more comprehensive design, consisting of an extension of the modified pier from the Keith Inch, and the projection of another main pier from near Salterhead, enclosing the greater part of the bay, amounting in all to 190 acres of low-water area, of which 116 acres have 12 feet and upwards, and 95 acres have 18 feet and upwards at low-water of spring tides. From the greater exposure of the piers and the greater depth of water in which these works are situated, this extended plan will necessarily cost considerably more than the modified one, but we think it may be executed at a cost not exceeding 335,000*l.* It appears to us to be undesirable, in an engineering point of view, to place the piers farther seaward, nor does it seem that this would be necessary, as the large area which they enclose would probably be ample for all the purposes of a naval station; but on this point, however, we do not profess to be able to form an opinion.

In submitting these designs and estimates, we have to state, that they proceed on a careful consideration of the whole subject, and are based on our long intimate knowledge of Peterhead, its bay, and its quarries, as well as on a visit made in December last, on which occasion we were accompanied by Mr. James Leslie, of Edinburgh, of whose advice we have also had the benefit in preparing the designs now submitted, regarding which, as well as the subject generally, Mr. Leslie will furnish a separate report.

The necessity for a harbour of refuge on the dangerous coast intervening between the firths of Forth and Cromarty will no doubt be considered by the Committee as a purely nautical question, to be spoken to by nautical men; but we have no hesitation in expressing our opinion, founded on frequently repeated personal navigation of the coast, both under steam and canvas, that such a refuge would be of vast importance to shipping, and that the south bay of Peterhead is the most favourable spot for its construction. It is true that opinions, somewhat adverse to this view of the matter, and representing that a harbour of refuge is not required on that coast, and that moreover the bay of Peterhead possesses no sufficient capabilities for the purpose, were laid before the Committee of Parliament last session, in regard to which, all that we shall say is, that we widely differ from those who held such views.

In corroboration of the opinion we have advanced, we append two tables, taken from the records kept at the lighthouse stations on the east coast, which show the comparative amounts of traffic and of wreck at different parts of the coast.

Table No. 1 is a statement of the number of vessels observed to pass each lighthouse station *during the day*, since 1849. This table does not of course include those vessels passing by night, nor yet can it be regarded as more than a rough approximation, but this does not affect its accuracy in a comparative point of view. It will be observed from this table that the average number of vessels seen to pass the stations per annum was as follows:—

Bell Rock - - -	10,587
Buchanness - - -	7,763
Kinnairdhead - -	4,532
Covesea - - - -	3,177
Tarbetness - - -	1,875
Nosshead - - -	2,806
Pentland Skerries - -	3,113
Dunnethead - - -	3,249

The other table is a statement of the wrecks of vessels (exclusive of boats) reported to have taken place within the limits of the different stations during the same period, and the following are the total numbers:—

Inchkeith - - -	1	
Isle of May - - -	5	
Girdleness - - -	8	35
Buchanness - - -	11	
Kinnairdhead - - -	16	
Covesea - - -	20	
Tarbetness - - -	3	
Nosshead - - - -	2	
Pentland Skerries - -	8	
Dunnethead - - -	8	

This table shows that of the whole number of 66 wrecks reported from the lighthouse stations between Inchkeith and Nosshead—a distance of about 250 miles of coast,—one half of them, or 35, occurred on the short stretch of 40 miles of coast between Girdleness and Kinnairdhead, on which coast the south bay of Peterhead holds a central position. We must not, however, be supposed to hold the opinion that, were a harbour of refuge established at Peterhead, such a harbour would provide for similar wants on the more remote northern shores of the country. The boats engaged in the highly important herring fishings of Caithness, and the vessels navigating that coast, would derive no benefit from a harbour at Peterhead, neither would the large mercantile and coasting traffic which frequents the coast of Aberdeen be benefited by the establishment of a harbour at Wick. We believe that the east coast of Scotland will still be wanting in that shelter which a maritime country like this absolutely requires, until asylum harbours, suited to the wants and circumstances of the localities, are erected both at Peterhead and at Wick.

(Signed) D. & T. Stevenson.

Edinburgh,
February 9, 1858.

Appendix.

No. 1.

Table of the Number of Vessels observed passing the following Lighthouses during the day, yearly.

	1850.	1851.	1852.	1853.	1854.	1855.	1856.	Averages
Bell Rock -	12,367	9,988	10,095	11,861	11,169	10,206	9,022	10,587
Buchanness -	10,186	9,310	8,885	7,412	8,054	5,224	5,274	7,763
Kinnairdhead -	4,789	4,692	4,752	4,980	4,816	3,961	3,734	4,532
Covesea - -	3,967	3,396	3,060	3,091	2,456	2,852	3,415	3,177
Tarbetness -	1,830	1,936	1,522	1,749	1,642	1,878	2,567	1,875
Nosshead -	3,232	3,640	3,252	2,641	2,213	2,396	2,268	2,806
Pentland Skerries - -	2,714	2,795	2,769	3,555	3,904	2,788	3,263	3,113
Dunnethead -	2,498	3,537	3,783	3,851	2,840	2,698	3,533	3,249

No. 2.

Table of Shipwrecks reported in Returns from the following Stations.

	1850.	1851.	1852.	1853.	1854.	1855.	1856.	Totals.
Inchkeith -	1	0	0	0	0	0	0	1
Isle of May -	0	1	2	1	0	0	1	5
Girdleness -	1	0	3	1	3	0	0	8
Buchanness -	2	0	4	2	1	0	2	11
Kinnairdhead -	3	2	6	1	0	3	1	16
Covesea Skerries - -	2	1	7	3	1	2	4	20
Tarbetness -	1	0	0	1	0	0	1	3
Nosshead - -	0	0	0	1	0	1	0	2
Pentland Skerries - -	5	0	2	0	0	1	0	8
Dunnethead -	2	1	1	0	1	1	2	8

APPENDIX, No. 5.

Admiralty Survey, Oban,
Jan. 11, 1859.

Sir,

My knowledge of the east coast being very limited, and my time so occupied with the details of the survey of the ports of Peterhead and Fraserburgh, I hesitated to offer any opinion as to their capabilities for harbours of refuge, from the imperfect experience thus to be acquired. It being, however, your desire that such should be presented, I beg to offer the following general remarks founded on the late survey, and also on some former observations.

As a principle, I consider that, from the variable nature of the weather on our coasts, the suddenness with which gales arise, and the immense scattered trade conducted by every class of vessel along the shores, the best interests of the country would be carried out by the construction of harbours at the most eligible positions, with sufficient depth to admit any class at low-water spring tides. Unless, therefore, upon national considerations alone, any particular locality is found to offer undoubted advantages for the construction of a harbour of refuge upon such a scale as has been suggested during the late inquiry, demanding the expenditure of public money to a large amount, I venture to propose, in lieu thereof, pecuniary aid towards converting the present tidal harbours to the above-mentioned purpose, having in view, as regards the fisheries, the uncertainty of the districts where the fish at different seasons may be most abundant, and consequently where the greatest number of boats may be congregated requiring shelter. It may also naturally be expected that the favoured locality upon which it may be proposed to expend a large sum would draw the neighbouring trade towards it, to the injury, and perhaps destruction, of many small ports, where much energy and enterprise had already been displayed, emanating from private sources alone. Upon the east coast of Scotland, Wick is the only exception to this proposition, from this consideration, that it being absolutely necessary to afford protection to the many thousands of men brought together from all quarters in the prosecution of the herring fishing, and that such protection cannot, I conceive, be given, with any hope of permanent utility, or of being taken under all circumstances, by any construction short of the entire enclosure of the whole bay. And although this would embrace an area far beyond the wants under consideration, it would offer a refuge such as, under many circumstances, would be thankfully admitted as an imperial boon.

I will now shortly speak of the bays of Peterhead and Fraserburgh, not as to their position offering advantages, geographically or otherwise, over other ports, for I do not consider my information sufficient to warrant that, but as to their several capabilities either for the construction of a harbour of refuge as required for national purposes, or for their improvement on the more limited scale previously suggested.

At Peterhead much has already been done by private enterprise. It has a considerable coasting trade, above 28 ships engaged in the whale and seal fishery, and its artificial works and extensive southern bay afford shelter to numerous vessels which, from its prominent position, must be drawn towards its shores. During my limited time for observation, viz. between the 30th of September and the 25th of October, nearly 500 vessels of all sizes passed the heads or entered the bay and harbours.

The entrances to the north and south harbours are, however, difficult, and sometimes impossible to make, and the bay is exposed to heavy seas from the eastward. A secure and extensive haven could be formed by enclosing the latter within a breakwater extending between the south head and Salthouse Point, running upon about an eight fathom line, which would embrace an area for shelter of the following capacity:—

From 5 fathoms and upwards		-	- 104 acres.
„ 3 do.	do.	-	- 150 „
„ 1 do.	do.	-	- 186 „

and would berth (allowing a scope of cable of from 50 to 38 fathoms) either

9 line-of-battle ships of 250 feet long;
35 vessels from 100 to 120 feet; or,
77 coasters about 70 feet.

If moored in tiers a greater number could of course be accommodated. All evidence in support of the good quality of the holding ground I consider fully established by the tests applied in the course of the survey, for although in the usual anchorage we did not find clay at the depth attained by the borer, yet the sand (dark and fine*) was of so tenacious a quality as to require a strong purchase to draw the pointed instrument from its hold. This good holding ground extends over the greater part of the bay, and red clay was found in four fathoms off the Brickworks. Independent of any works which it may be desirable to construct within the bay, and certainly as a part of any proposition for improvement, I would propose—

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* Specimens were sent to the Commissioners.

1st. Lowering the beds of the present harbours, so as to give a uniform low-water depth of six feet at least; for at present, whilst the north harbour averages that depth, the southern one is nearly dry at low-water springs.

2ndly. The removal by blasting of the off-lying rocky bed and detached stone near the south entrance, severally known as the Horse Rock, Man Craig, and Aid Stone, upon which both herring boats and vessels have been wrecked.

3rdly. It would further facilitate the egress of vessels by the north entrance if the strength of the ebb stream, which runs about 1¾ knots, was checked at the canal mouth by either a gate or boom, as its present tendency is to throw them on low-water rocks, which are too extensive to attempt removal.

4thly. The establishment of a uniform code of tidal signals, to be made under the direction of the harbour-master alone, as at present there is neither system or control, resulting in confusion and injury.

Fraserburgh, which lies about 18 miles north, holding nearly a like prominent position with the Moray Firth and the coast south of it as Peterhead does to the general coast, has much to recommend it under similar considerations to the foregoing. Its trade is more limited, but its artificial works and equally extensive bay offer at times good shelter to the passing trade, as, during the same time of observation as that before quoted, 418 vessels either entered the harbour or bay or passed on close by. The bay is, however, exposed to the north-east, and the harbours formed by the present piers nearly dry at low-water springs. An extensive and comparatively secure shelter could be formed by the construction of a breakwater towards the south-east direction from the present harbour, running upon about a six fathom line, embracing the following capacity—

From 5 fathoms and upwards - -	95 acres
,, 3 do. do. - -	184 ,,
,, 1 do. do. - -	283 ,,

and would berth, under like circumstances as before mentioned, either

8 line-of-battle ships; or, if moored, 17;
46 vessels from 200 to 400 tons; or,
116 coasters.

As, however, the good holding ground is limited in extent, it would be necessary to lay down moorings, as well for the vessels within the harbour as for bringing up those running for it in a gale of wind.

A reef of detached rocks, called "the bushes," extending from the present breakwater head towards the south-east, offers a very desirable foundation for its extension. Such a plan has been projected by the local trust, but hitherto delayed in its execution from want of funds. This would render smooth and easy of access the present harbours, (which, however, require to be considerably deepened,) and besides afford good shelter for a considerable number of vessels from the prevailing wind and seas.

An additional improvement would be opening an entrance through the north end of the present north harbour, towards Kinnaird Head, which would relieve its present narrow southern entrance of the pressure and confusion which generally occurs during the fishing season, as well as of allowing an easy egress, when, from the south-easterly swell, it might otherwise be difficult, if not dangerous. Several propositions made by me for the improvement of the harbour were liberally and promptly acceded to by the Harbour Commissioners, and are in the course of being carried out.

Another proposition resulting from the Survey, and in support of which evidence was tendered by numerous owners and masters of foreign and coasting vessels was made by me to the Lords Commissioners of the Admiralty, which was to mask or otherwise distinguish the lights of Buchanness and Kinnaird upon such a limit as would clear the off-lying reefs between Peterhead and Fraserburgh. An additional interest and importance to these two places would be that the proposed limit of these lights would indicate the best mark for anchoring in either bays.

The tracings from the Admiralty charts which were forwarded for the use of the Commissioners will further illustrate the foregoing statements and propositions.

I have, &c.
E. J. Bedford,
Commander R.N. and Surveyor.

The Chairman to the Royal
Commission on Harbours of Refuge.

APPENDIX, No. 6.

Statement regarding Estimate of Refuge Harbour at Peterhead referred to in evidence of David Stevenson, Civil Engineer.

Construction.—The breakwater to be constructed of rubble, deposited from a staging, and brought up to the level of 12 feet and 8 feet below the low-water line, according to the exposure. The slopes are calculated at the rate of from 1¼ to 1, to 6 to 1, according to the exposure.

Upon this mass of rubble a superstructure is to be raised to the height of 8 feet above high water. It is to have a width of from 30 to 40 feet on the top, according to the exposure. The stones above low water to be set on edge, and full allowance made for iron strapping.

A gangway of communication, fixed on certain of the service piles, which are to be left for that purpose, will lead to the lighthouse. The gangway will be kept at such an elevation above the breakwater as may be found necessary during the progress of the work, so as to be clear of passing seas.

The pier heads are to be brought up from the bottom with squared masonry.

The total quantity of materials in both breakwaters, as measured in work, is 600,000 cubic yards, to be got entirely from the neighbouring granite quarries, which have been in operation for the last 30 years, and have supplied materials for the naval works at Sheerness, St. Catherine's Docks, London Bridge, Banff Harbour, Fraserburgh Harbour, and many other places.

The total estimate is 335,000*l.*

The cost per yard within low-water mark varies from 224*l.* to 321*l.* per lineal yard, including pier heads.

The prices are as follows:—

Rubble deposited in breakwater, 3*s.* per cubic yard.
Rough facing of superstructure from 30*s.* to 40*s.* per cubic yard, according to exposure, and 50*s.* per yard under low water.
Rough backing of superstructure, 10*s.* to 15*s.* per yard, according to exposure.
Pier heads of breakwater, 45,000*l.*
Lighthouse, 6,000*l.*

N.B.—In addition to the above prices there is a sum varying from 15 to 20 per cent., according to exposure, added for incidents, the aggregate addition for incidents being 48,000*l.*

For D. and T. Stevenson,
David Stevenson.

APPENDIX, No. 7.

The Ships belonging to us, and registered in Glasgow from 1839 to 1857, inclusive, made 1,522 voyages to various parts of the world,—say to Quebec; St. John, N.B.; Miramichi, Dalhousie, New York, Savannah, Mobile, New Orleans, Australia, Bombay, Calcutta, Callao, &c.; and during that time we lost 12 ships wrecked, and one burned at New Orleans Bar,—say 13 ships lost in all.

Pollok, Gilmour, & Co.

List of Ships Lost.

—	Ship's Name.	Tonnage.	When and where lost.
1842	Joanna - -	556	Lost 18 Nov., off Dalhousie, N.B.
1844	Ritchie -	916	Lost 27 June, off St. Mary's Newfoundland.
,,	Carlton - -	534	Lost 30 Oct., in River St. Lawrence.
,,	Bytown -	615	Lost 7 Nov., on Magdalene Islands.
1846	Pekin - -	668	Lost May, in River St. Lawrence.
1847	Calliope -	671	Lost 21 Nov., at sea, from Callao.
1848	Agnes Gilmour	917	Lost 27 Feb., at sea, from Callao.
,,	Enchantress -	833	Lost 22 Sept., on St. Paul's Island.
1849	Coverdale -	312	Lost 13 May, in the ice, Gulf of St. Lawrence.
1850	Corsair - -	717	Lost 20 June, off Cape Race, Newfoundland.
1853	Abeona -	612	Lost 18 March. Burnt at New Orleans Bar.
1856	Meams - -	756	Lost 1 July, off Cape Folly, Newfoundland.
1857	St. John -	573	Lost 24 Sept., off Point Miscon, Chaleur Bay.

APPENDIX, No. 8.

EVIDENCE respecting Harbours of Refuge taken at Bow More, Lochandail Bay, Islay, Thursday, 16th September 1858, by Chairman, Admiral Hope, C.B.

Mr. Thomas Murray, agent for Lloyd's at Bow More, Islay, at Admiral Hope's request, procured the attendance of several of the pilots and fishermen, whose examinations follow:—

Archy M'Gilvery, Fisherman, examined.

(*Chairman.*) I have been fishing here for the last 30 years.

Are you well acquainted with the bay of Loughindall?—Oh yes.

Now, you see that portion of the anchorage on the chart from Port Charlotte out to Oversea Island where the lighthouse is?—I do.

Is that portion of the anchorage perfectly free from weeds? Oh yes, perfectly free.

What is the nature of the bottom there; what kind of anchorage; is it good holding ground?—It is just common sand, between hard and soft.

And have you any notion what is under the sand?—I think a little clay is under it.

Have you ever seen vessels anchored along here?—Yes, often.

Did you ever know of a vessel to drive?—I did, different times, and taking their tacklings with them.

How was the wind then?—The wind was at the north-west, and sometimes due west, when they drove.

When they drove what became of them?—Sometimes they would take up again, and at other times they would not, and they would go ashore in the bay.

Then where did they go ashore when they drove with a north-west wind across the bay?—They would go ashore on the lee side of the bay.

So that they drove up the bay?—Yes, according to the winds.

When they went ashore did they do themselves any mischief?—No harm.

So they got off safely afterwards?—The most of them.

Do you know the number of lives lost under those circumstances?—Very few.

Was there not the loss of an emigrant ship somewhere, when a very large number of lives were lost?—Yes, on the other side of the lighthouse, and not a soul saved.

(*Mr. Murray.*) It was the *Exmouth;* two or three were saved only.

(*Chairman.*) Where did that take place?—Between Port Bhen and Lanaig Point.

Now I have been told the anchorage at the upper part of the bay is not very good; on account of the sea weed, that anchors don't bite. Is that so?—There is as good holding ground as could be wished to be found inside where you (the *Banshee*) are at anchor.

Is not the top of the bay, from the Saltpan Point upwards, covered with sea weed?—Yes, the most of it; but there are some holes of clean sand, and the other parts are covered with weeds, but where the weeds are it is the best for holding.

Have you ever known vessels drive from their anchors in the upper part of the bay?—Yes, I did.

What do you attribute that to?—Perhaps they had too short a scope of cable.

But was it not owing to the anchors biting on account of the weeds?—No. The weeds do no harm; it is only small common green grass.

What was the largest number of vessels you have seen at anchor in here at one time?—I remember to have seen about 60 or so at one time.

At what time of the year?—In the winter time; in the month of January or so.

Was it lately?—No; it was, perhaps, 30 years ago.

But of late years, during the last 5 years, what would you say was the largest number of vessels you saw anchored in here?—Sometimes 14, 15, or 16, and up to 20; but not much further, this sometime.

What description of vessels were they?—They were mostly small coasting vessels; there might be a few foreign vessels, but very few.

What was the largest ship you ever saw in here?—It was 1,800 tons or so; there was one of that class in last winter; but she was thrown off her course, and nearly went on shore. She was dismasted at the mouth of this lough. It was the "*United Kingdom*" of Belfast.

Now, in the rough, how many vessels have you seen in here at anchor, over 500 tons burthen, during the last 12 months?—Well, I can't really give you the number, but there were very few over 500 tons; it would not pass over three or four of that sort. I remember there was another ship that carried away her royal mast outside, and was obliged to come in here, and get a steamer to bring her to the Clyde. It was the *Eclipse* of Yarmouth, and she was between 1,600 tons and 1,700 tons.

Is it generally with a north-west wind that ships beat in?—The north-west is the worst here generally; they mostly get ashore with that wind.

Is it generally with a north-west wind they come in for anchorage and shelter?—No; it is from a south-west wind they must come in for anchorage and shelter.

And where do they anchor when they come in with a south-west wind?—According to the size of the vessels. The smaller vessels about where the *Banshee* is anchored; and the larger vessels above Port Charlotte.

At which side do they anchor, at Port Charlotte side or at the Salt Pans?—Nearer to the west side.

Is there anything else that occurs to you to say to me about the anchorage?—Yes; the higher you are up the better the holding ground. All this side, from the Maol Naho to this village, is full of sunken rocks; but the other side is clean for anchoring all the way along.

Duncan M'Intosh examined.

I am beadle of the kirk, and pilot. I am more than 20 years a pilot.

You have heard the evidence of the last witness read?—Yes.

Do you agree in it generally?—Oh yes; it is not wrong at all; it is quite right.

Describe to me the nature of the bottom between Port Charlotte and the lighthouse?—It is sand, except some places which is a little rougher than others.

Have vessels anchored there great trouble in purchasing their anchors?—They have a difficulty. With west winds heavy swells come in, and they get a great deal of trouble before they get their anchors out. It is not proper anchorage down there at all.

With a wind from the north-west does a heavy sea set into the lough?—Yes; a very heavy sea.

And is there a heavy sea into the upper anchorage?—No; it is a great deal smoother after crossing the bar.

Where is the bar?—It runs across from Ardlarach Point to a quarter of a mile north of the Little Burn below Conisby. The channel is a quarter of a mile wide; two thirds from this side and one third from the other.

What sized vessel come inside the bar?—One drawing 19 feet water at spring tides can come in.

What sized vessels can come in at low-water spring tides?—Vessels drawing about 9 or 10 feet.

At low-water common tides at what draught of water can a vessel come in?—At 14 feet.

And can they come in any weather with that draught of water?—Oh yes, they can.

I mean, however heavy the sea is rolling in, can a vessel drawing 14 feet water come over the bar without striking?—Yes.

What is the rise and fall of the tide?—About 9 feet in spring tides; there is not much rise and fall in neap tides.

And at common tides what is the rise and fall?—The tides are very much affected by the winds; with a south-west wind we have the greatest rise of tides.

What is the greatest rise of tide you have known with a south-west wind?—Say 18 feet, the greater part of which is owing to the wind.

With reference to my former question, as to the difficulty of purchasing the anchors, understand that I mean the difficulty of raising it, solely from the nature of the holding ground?—Yes. In calm weather the anchors come up quite easy.

When vessels part with a north-west wind, what part of the bay do they go ashore?—They will drive up to the bank.

With respect to the sea which is inside the bar, do you agree that that is the best anchoring ground where there is most sea weed?—The grass is of no account; but when a vessel drives, the grass sometimes chokes the anchor, and there is a difficulty in it holding.

But, in such a case, would not a second anchor let go bring the vessel up?—Yes; if they gave her a good scope of chain at once.

And if, in anchoring a vessel, a good scope of chain is given at once, there will be no difficulty about it?—No.

Is there a very heavy sea set into the lough in a south-west wind?—Yes, a very heavy sea.

Is there a very heavy sea in the anchorage over the bar in a south-west wind?—Yes; with a gale of wind.

In south-west gales of wind do vessels frequently part from their anchors and go ashore?—Yes, in a heavy gale; frequently some that have bad chains.

And in such a case is there any possibility to get at the vessels and save the crews with a boat?—Oh yes; they will be all saved.

Does the sea break over the vessels?—Yes; the sea will go over the vessel on the beach, but there is no danger of the men. They are high up and walk ashore easily when the tide leaves them.

Have you any life-boat here?—No.

Would a life-boat be of service?—Oh yes; in Lagan Bay especially, because it is the most dangerous part of the bay for vessels going ashore; lives have been lost there often.

How far do the sunken rocks extend from the east side of the bay from the Maol Naho to Lagan's point?—Generally from half a mile to three quarters of a mile.

And you say it is the south-west gales that bring in vessels here?—Most of the times; they will not come in with north-west gales. The vessels that come with the south-west winds are chiefly in the coasting trade, bound to the west of Ireland, that are blown off Tory, and cannot get into Lough Swilly.

How many vessels in the foreign trade do you bring in in the year?—From two to three in the year; and perhaps none at all.

What sized vessels are they generally?—From 500 tons to 1,000 tons, therefore vessels in the foreign trade outward bound.

HUGH MCGILVERY examined.

(*Chairman.*) I was a long time master of a trader from this port to Glasgow and Liverpool. I was so employed for about 20 or 25 years.

Have you ever run into this lough in a heavy south-west gale?—Yes, I have a thousand times.

And you have run over the bar without difficulty?—I did, for I was well acquainted with it; but I think it would be very necessary that a light should be on the north-west side of Conisby, for conducting strange vessels in safety.

And would leading marks over the bar be of service? I mean beacons?—I think buoys on each side of the channel would be preferable to leading marks; but something is very much wanted for strangers.

Have you ever rode out a north-west wind inside the bar?—I have; but I lay in the best anchorage.

And was there a heavy sea then inside the bar, at the anchorage where you lay?—It was very heavy, for it was a very severe gale; but I rode it out.

And have you often rode out heavy gales in vessels inside the bar?—I have, often. I rode out a gale in which thirteen were stranded.

And out of these 13 so stranded were any totally lost?—No.

Were any lives out of these 13 vessels?—I am thinking not.

Mr. THOMAS MURRAY examined.

Do you think that a lighthouse and beacons for the channel over the bar are required?—Very much so. I have seen a poor fisherman and myself coming in there very nearly lost; and I have seen fishermen's boats and lives lost.

Where would you propose to place the lighthouse?—Just under Conisby. It is marked out already by the surveyors from the northern lights.

How many lives have you known lost since your residence at Bow More?—During the last 25 years 30 at the least.

Will you forward to me at your convenience a detailed statement of the number of lives lost during the 25 years you knew the place?—Yes.

When the vessels got ashore on the top of the bay describe the means used to get them afloat.—I just discharged the cargo, and docked them out, if they had not injured their bottom. If they are injured in the bottom we patch them up, and send them round to any harbour we get nearest for repairs.

You keep a book showing the arrivals and sailings into Loughindall?—Oh yes; I have done so for 25 years.

Will you forward to me, at your convenience, an abstract, in the form which I will now supply to you, of the arrivals and sailings for the last 20 years, and a copy of your book for the last 5 years?—Yes.

Have you anything further to add to what you stated?—No; I think not.

Are the number of vessels that resort to Loughindall on the increase, or otherwise?—They have decreased.

Now what reason do you ascribe for that?—Since the potato failure in England and Ireland they need the grain in Ireland themselves; whereas it used to be sent to Liverpool, London, and Glasgow. That has caused the coasting trade to be not nearly so good; but it is on the increase, and I think since the potatoes in Ireland have improved it is getting better.

APPENDIX, No. 9.

REPORT on the Deficiencies of Lights, Buoys, and Beacons on the West and North Coasts of Ireland. By Captain G. A. BEDFORD, R.N.. Admiralty Surveyor.

IN obedience to the instructions received from Her Majesty's Commissioners on Harbours of Refuge, at their sitting at Portrush, on the 10th September 1858, I have the honour to lay before them a Report of the condition of that portion of the western coast of Ireland included within the limits of the Admiralty Survey under my direction, in reference to the deficiency of lights, and other facilities for the navigation of that coast, and the several harbours contained within it.

My remarks will be confined to subjects that fall strictly within the limits of the present inquiry; and I gladly avail myself of this favourable opportunity of exposing the destitute and neglected state of some of the principal harbours and roadsteads which, if properly assisted by artificial means, would afford the much required refuge to the passing trade.

It has been truly stated that there are many natural harbours on the western coast of Ireland; but, with the exception of such as constitute the emporiums of the several coast counties, they are nearly all destitute of lights, buoys, or beacons, and, consequently, unknown and unavailable to the general trade.

Besides, harbours of refuge are not necessarily commercial ports, consequently there is no presiding influence to care for them, nor funds to furnish the requirements: or, if there be any local harbour board, its income may be too small to supply the deficiencies, and yet many damaged or storm-pressed vessels would gladly avail themselves of the shelter afforded, if they were made accessible to them.

A coast thus circumstanced must either be provided for by the national purse, or life and property must suffer for the want of it: and to effect the required improvements, a much better supervision and conservancy of the harbours is demanded, for they are, with the few exceptions alluded, left in a state of nature.

I shall confine my observations merely to the principal harbours and roadsteads, commencing with

GALWAY BAY.

The dangers that lie in the course of a ship to and from the harbour of Galway, occur about two miles below Mutton Island Lighthouse, viz., Black Rock on the north side, and Margaretta Rock on the south. The highest part of the former dries five feet above low water, and is distinguished by a Perch, that in many points of view is very inconspicuous. Several rocks uncover nearly a quarter of a mile to the westward of the Perch.

The Margaretta Rock has only 10½ feet water on it at mean low-water springs, and is marked by a very inconspicuous buoy. It lies one mile S.S.E. ½ E. from Black Rock Beacon, and one mile S. S. 63° W. from Mutton Island Lighthouse. A broken ledge from three to five fathoms deep extends half a mile to the westward, and is dangerous to large ships at low water.

At night the rocks may be avoided by a bearing of the light, provided the compass be correct, and the proper bearing known. But this is not always the case, as in the late instance of running ashore the *Indian Empire* transatlantic steamer, on the *Margaretta,* which might have been her destruction. Two local pilots were on board at the time.

In thick weather, such as to obscure Mutton Island Light, there would be considerable risk of striking the rocks on either side, and since the establishment of a line of large steamers from this port to America, it is essential that all due precautions against danger should be taken.

The most effectual mode is that of building a lighthouse on the Black Rock, or of mooring a lightvessel near one of the dangers: for it has this advantage, that it gives warning two miles in advance of the present light, and in thick weather the signals can be made on the actual site of the danger, which is particularly useful to sailing ships when beating.

The next best arrangement would be to place a bell buoy at the western extremity of Margaretta Shoal, allowing the present buoy to remain to mark the rock (but made more conspicuous); to build a solid tower on the Black Rock; and to place another light in the present tower of Mutton Island, or near it, having danger screens to mark the limits of the channel. With these improvements, the navigation of the Bay would be well suited to its present condition.

ARRAN ISLES.

Since the discontinuance of the light on the summit of Aranmore, and the substitution of others at the extremities of the range, a very serious want has been felt by the fishermen of Galway who are a very numerous class, the Claddagh alone possessing about 300 boats, from 15 tons and under. They often harbour in Killeany Bay, at the eastern side of Aranmore, but it is now very difficult to distinguish its entrance, so that, in attempting to run for it, they incur much risk.

Considerable help was afforded by the former light, not only for Killeany Bay, but its bearing also pointed out the entrances to Greatman's and Cashla Bays on the north shore of the mainland, which are much resorted to for turf and seaweed; but now all the eastern shores of the Arran Islands, and some of the North Sound, are thrown into darkness.

To obviate this inconvenience, I recommend a small light to be placed on the summit of Straw Island, and its advantages would be these:

1st. It would be an invaluable boon to the fishermen.

2nd. It would render Gregory Sound available to ships at such times when it would be important to run through this passage, instead of bearing up for the north or south sounds, and sacrificing a desirable weatherly position not easily regained.

3rd. It would enable ships to anchor at night in Killeany Bay, and maintain a weatherly position of 24 miles, in place of returning to Galway, when the westerly winds are too strong to contend against.

4th. It would indicate the positions of Cashla and Greatman's Bays; and in conjunction with the other two lights, it would illuminate the whole of the waters within the islands.

I quote the written words of one of the leading fishermen of the Claddagh, in a letter addressed to me, on this subject.

"The poor fishermen are in a pitiful state for want of a light on Straw Island, since they lost the other; they say it will be the cause of many lives lost. I and you well know the bad entrance to Killeany Bay in a dark night. The poor men often speak to me to know could you be of any service to them in getting a light on Straw Island, and I tell them you have proposed for it before."

Should a light on Straw Island not be conceded, I would suggest that two single Argand lamps, distinguished by colour, be placed on pillars, on Killeany Point, within the bay, so as to lead into the harbour, principally for the benefit of the fishermen. The expense of maintaining this boon would be small, and the benefit great, and the care of the lights might, perhaps, be entrusted to some respectable man residing in the island.

And here I would remark, how much could often be done in this way, at a trifling cost of one or two lamps judiciously placed, which would open up many harbours now inaccessible.

Passing over the numerous inlets that indent the coast between Slyne Head and Galway Bay, as being too complicated for night navigation, yet possessing many fine harbours, we come to

Clifden Bay.

Clifden Harbour, situate at the head of the deep bay formed on the north side of Slyne Head, is one of the finest on the western coast of Ireland, and was much resorted to by our cruizers, and would be again, in the event of a war. It is well placed for supplying the commercial wants of Connemara, a district that is undergoing much improvement.

Its entrance is contracted by a sand bar, having a maximum depth of 14 or 15 feet at low-water spring tides, which rise 13 feet, making 27 or 28 feet at high water.

This bar is of sand, and capable of easy removal by the dredge.

To make it accessible by night, would require a small light on the Seal Rocks, that rise above high water to the height of about 12 feet, at a distance of three miles in front of the harbour, and are steep to on the south side where the course of a vessel lies.

A second light must be placed on Fishing Point, at the south entrance to the harbour, close to which vessels pass in going in or out. As it is only three miles from Seal Rocks, and therefore requires to be seen but a short distance, a very small building, with two or three lamps would suffice.

A less expensive arrangement might answer the purpose by having another light on the north side of the harbours, near Clifden Castle, so that when brought in one with that on Fishing Point would lead right in from sea, clear of all the dangers on each side, as the channel is fortunately straight up to the entrance of the harbour.

If the bar were partially removed, the two lights just described would be sufficient for all the requirements of the navigation, otherwise it would be necessary to have two single lamps at the head of the harbour, to lead over the deepest water.

At high-water neaps there will be a depth of 18 feet over any part of the bar between the two shores, and 21 feet at springs, while (as I have already mentioned) there will be 28 feet in the deepest part.

Within the bar the harbour expands into a spacious and deep basin, capable of sheltering any class of shipping; while its westerly position, intermediate the harbours of Galway and Westport, gives additional value to this inlet, and makes it worthy of attention.

As the mouth of the harbour is not open to the westward, it sometimes happens that strangers having mistaken the open bay of Mannin, and thereby incurred risk or loss. The lighthouse, therefore, on Fishing Point would obviate this liability to error.

The several inlets of Cleggan, Ballyaskill, and the two Killeries, are all harbours for shipping of any size; but they have many outlying dangers that require an intimate local knowledge, and could not be guarded against at night, without a much more complicated arrangement of lights than is required at Clifden. Neither is there one port from Galway to Clew Bay, including a most dangerous coastline of 100 miles extent, for which a distressed ship could run for at night without imminent risk of destruction. It therefore seems highly desirable, for the safety of life and property, that the harbour of Clifden should be put in such condition as to make it available at all times. Even if it be not thought worth while to incur the expense of lighting, a few buoys might be laid down to render its navigation easy by day.

Coast of Donegal.

The remaining portion of the coast of Ireland, of which I am qualified to speak, is that of Donegal, where, from Killybegs round to Lough Swilly, a distance of 80 miles, there is no harbour available at night.

The distance from Rathlin O'Birne Island (situate at the northern entrance to the Great Bay of Donegal) to Tory Island is 43 sea miles, and on each of them there is now a light.

The salient point of this coast is the north-west extremity of Aranmore Island, distant from Rathlin O'Birne 23½ miles, and from Tory Light 19½ miles, while the distance at which each of these lights is visible is stated to be about 16 miles. On this prominent point of Aranmore a lighthouse formerly stood, until, in 1832, the light was removed to Tory Island, leaving a very serious deficiency on this dangerous coast, for the light on Rathlin O'Birne was not exhibited until 1856. Even under the present arrangement the absence of Aranmore Light is felt to be a great want, not only by ships making the coast from America, but especially by the traders.

Ships from America bound round the north end of Ireland, and uncertain of their position, have fallen in upon this coast between the lights of Tory and Rathlin O'Birne, without being able to see either, whereby they were wrecked. I may instance the *Marchioness of Clydesdale*. She was lying-to in a heavy gale and thick weather, and had not sighted the land since she left America. The captain considered himself to be off Tory, whereas she struck on the south shore of Aranmore, and broke to pieces—the lives saved. Had the light remained, it would, in all probability, have been seen in time to enable the ship to have cleared the land.

In February 1857 the steamer *City of Worcester* was wrecked on Illancrone, a small island about four miles to the south of Aranmore. The weather was fine, but it was night, and the master was not aware of the indraught to Boylagh Bay, and she was carried on shore. The Coast Guard inspecting officer has stated, that he had no doubt that a light on Aranmore would have saved both these vessels; and Lieut. Collins, when reporting the wreck of the *Marchioness of Clydesdale*, recommended the restoration of the light on Aranmore.

It is true that if Rathlin O'Birne Light is kept in sight, that is, if it is not allowed to be eclipsed by the intervening land of Teebin Head, a vessel coasting up from the westward ought to be able to keep out of Boylagh Bay; but to a ship coming in from the offing, there is great liability to risk when it is considered that, under favourable circumstances, the light of Rathlin O'Birne is lost to sight at a distance of seven or eight miles short of Aranmore.

It cannot reasonably be objected that confusion might result from having three coast lights distributed through a distance of forty-three miles, while the more commanding height of Aranmore gives its light an advantage over the other two, and enabled vessels, by its bearing, to avoid the dangers on either side.

Aranmore Roadstead.

This anchorage on the eastern side of the island of Aranmore affords good shelter except in northerly or north-east gales. Close to it is the small but secure harbour of Rutland, capable of receiving vessels drawing 16 feet at high-water neaps but approached by an extremely narrow passage. In this locality something has been done to facilitate the navigation; but the Blind Rocks at the entrance, and Calf Island Rock of 11 feet, lying in the middle of the roadstead should be marked by buoys.

Twelve hundred feet of breakwater, joining Calf Island and the Blind Rocks, with a small light at its extremity, would convert this precarious roadstead into a secure harbour. In making this statement I merely desire to record what the place is capable of being made should circumstances ever demand the outlay. The best material for the work is abundant.

GOLA ROADSTEAD.

The several anchorages under Gola and the adjacent islands, if better known and appreciated, would be highly important and useful, especially to the coasting trade. They were first brought before the notice of the public by the late Commander Mudge, when surveying them.

The numerous and extensive shoals lying off these islands, while they interpose a material barrier against the advance of the heavy ocean swell into the roadstead, do at the same time present a very forbidden aspect to the mariner who, for the first time, attempts to find shelter within them; and for this reason it is that many who are caught off this coast with strong adverse winds, sacrifice all that they have gained, and run away for some distant port, instead of holding their ground in Gola Roadsteads. It a common occurrence for vessels to run to Lough Swilly, and sometimes to Lochandail to obtain shelter from south-west or westerly gales.

The fact and reason of this is that, there are neither lights buoys, or beacons, to mark out the dangers and give confidence to the mariner. Neither is it a place where pilots (if there were any) could board vessels when running in during a storm. The knowledge must, therefore, rest with those on board, and can only be efficiently conveyed by distinctly marking out the highways leading to safety.

There would be no difficulty in doing this with about seven buoys; but without them it is almost impossible to give a stranger such an idea of the several courses, as to inspire confidence and induce him to avail himself of it.

The Roadstead is also capable of being made accessible by night, by the skilful arrangement of two lights on the north end of Inishinny, to lead up the north sound; and another on Inishfree to guide into the western channel.

Within the shelter of the Gola Islands is Gweedore River and the harbour of Bunbeg. The bar at the mouth has 13 feet on it at high-water springs, and nine feet at neaps. At Bunbeg there is a neat settlement founded by Lord George Hill, about 1843, whose philanthropical exertions to ameliorate the condition of this wild and remote district, have not met with that encouragement and gratitude from the people, which they so richly deserve.

INISHBOFIN.

The Island of Bofin, the innermost of the three that lie off the mainland between the Farland point and Horn Head, is often the resort of coasting vessels engaged in the Kelp trade; and gales have sometimes been weathered there by small craft that could haul close underneath the land. A small breakwater from the south-west point of the island would render this anchorage a tolerably secure roadstead, but the holding ground is not good.

A buoy is much required on a dangerous sunken rock that is much in the way of veseels anchoring in Toberglassen Bay, on the north-east side of Inishbofin, where vessels find good shelter in westerly winds. It was, I believe, unknown previous to my survey.

SHEEP HAVEN.

This deep and wide-mouthed inlet, almost entirely free from dangers, and most easy of access, would make a very fine harbour of refuge by the construction of a breakwater of about 2,000 feet at Downies Point, on the south-eastern side of the haven. From the direction in which the haven indents the land, the anchorage at Downies Bay can be reached in a gale, when Lough Swilly might not; indeed, there are few places where the configuration of the coast is better suited for being made into a fine harbour. The blowing sands are, however, somewhat unfavourable. In its present natural condition it is resorted to by many coasters and fishermen from the Skerries; but the sheltered part is too confined and the water too shallow except for vessels of light draught who can haul close in. The undertow is also so great in a heavy storm as to render riding very precarious.

Black Rock, off the eastern shore, would be a very eligible site for a lighthouse; it rises 22 feet above high water. This, and a single lamp to mark the Downies Point, would well suffice.

A perch is required on the Wherryman Rocks that lie in the way of vessels going to and from the anchorage.

MULROY BAY.

The inlet of Mulroy, intermediate Sheephaven and Lough Swilly, is conspicuous in daylight from the tower that stands on the bold headland of Melmore. It contains an outer roadstead wherein vessels made ride securely in westerly gales; and even with the wind at north-west they would only be exposed to a rolling swell. It is an useful stopping place either for coasters or vessels waiting to proceed up the Lough.

The channel leading to the Lough has been greatly improved by natural causes since Captain Mudge made his survey about 1832, when the passage lay between the two Bar Rocks, only 360 feet apart and nine feet deep at low water, and a shallow flat some distance above; whereas now the narrow strip of sand that bars the fine, deep, and nearly straight channel within, has 12 feet over it at low water, and an average breadth of 700 feet between the two fathom edge, with a spring tide rise of 12 feet and nine feet at neaps. Mulroy is therefore capable of receiving vessels of considerable draught over its bar; and within the Lough the water is deep enough for any size; yet it is absolutely destitute of perch or buoy to define the channel or its dangers.

The Earl of Leitrim is the principal lord of the soil; and he proposes to build a pier to encourage a regular traffic by steam, which if carried into effect might be an additional inducement to facilitate its navigation; nevertheless, on its own merits alone as affording shelter to the coasting vessels, it has a claim to the public assistance.

The Requirements are—

A conspicuous perch on the Western Bar Rock.
A black buoy on the Bar Spit.
A red buoy on Melmore Spit.
A red buoy on Lenane Rock, a sunken rock of five feet only, lying right in the channel.
Two other small buoys to define the channel up to the entrance of the Lough.
A few small buoys on the edges of the banks within.

LOUGH SWILLY.

This spacious inlet affords the chief refuge to the coasting trade of the north and west coasts of Donegal.

During the time I have made it my head-quarters as many as 27 vessels have been at anchor at one time off Rathmullan; while in former years, ere the steamers ran off the coasting sailing vessels, 60 vessels have at one time taken refuge here.

Number of vessels boarded by the Coast Guard from 1st October 1857 to 1st October 1858 were - - - - - - 170
Total number from May 1856 to October 1858 - 380

The entrance is well distinguished by Fanad lighthouse on the western point, and the bold and lofty headland of Dunaff on the east, between which there is a clear space of 3⅓ miles, with a depth of 19 fathoms in the middle, and carrying 10 fathoms to within a short distance of the shore. There are no outlying dangers in the way of its approach, except the "Limeburner" rock, hereafter to be described. It has ample room for working to windward; and there are few inlets so free from obstructions, or more easily navigated, by night as well as by day, when guided by the Admiralty Chart and Sailing Directions, particularly if the necessary improvements, which I am about to suggest, were made.

The only dangers that occur in the lower part of the Lough are the Swilly Rocks, situate two miles above Fanad lighthouse, and half a mile from the western shore. They consist of two patches, and on the larger one (that dries 5 feet above low water) is erected an iron perch. There is a good channel between them, and the western shore, readily accessible by day.

The perch, like that on the Black Rocks in Galway Bay, is not sufficiently conspicuous, and of course is of no use at night.

There is ample space for the erection of a lighthouse upon the rock; but it is unnecessary, as the danger may be guarded against by simply exhibiting a single light from the establishment at Fanad Point, so screened as to be invisible within the danger limits. This could be at once adopted at small cost.

A bell buoy would also be very useful to give warning by night or in a fog. The bearing of the present light would, in most cases, suffice to keep a ship clear of the Swilly Rocks; but it is essential to know when you are above them, and may haul over to the western shore for an anchorage, or when beating up or down.

The next shoal that requires to be marked is Colpagh, two miles above Dunree, then the Kinnegar and Inch Spits, about 1¼ mile below Rathmullan or principal anchorage. On the last two shoals I have seen vessels ground several times for want of a buoy to mark them. There are marks for avoiding them, but strangers coming in without a pilot, require some unmistakeable notice of danger.

The first anchorage within the Lough is Ballymacstocker Bay, convenient and safe with winds from the western half of the compass, especially to coasters not drawing more than 16 or 18 feet. It is five miles above Fanad Point.

On the eastern shore is Leenane Bay, suited to easterly winds. In winter, when the swell continues high, vessels would roll a good deal in these anchorages, but would be safe.

The best and most frequented anchorage is off the small town of Rathmullan, where there is a pier. There is sufficient space and depth for the British navy. It is 12½ miles above the entrance.

The men-of-war anchorage used to be off Buncrana, on the opposite side, and three miles below Rathmullan; it is exposed to a long fetch from northerly and south-west winds, and the landing is not good. It was probably chosen for the town that is there, when that of Rathmullen scarcely existed.

I will here recapitulate the requirements of Lough Swilly—

1. A danger light for avoiding Swilly Rocks as proposed.
2. A bell buoy at the Swilly Rocks.
3. A black buoy on Colpagh Spit.
4. A black buoy on Inch Spit.
5. A red buoy on Kinnegar Spit.

If two or three small buoys marked the channel of Fahan Creek, in which ships may be laid aground to repair, and which is also the best winter anchorage for small craft, it would prove a great convenience.

Also, as there are forts on the salient points of the Lough, in which artillery men are stationed, it would undoubtedly facilitate the night navigation, if a single Argand burner (coloured according to the side) were placed in Dunree, Knockalls, Muckamisk, and at Rathmullan Pier. This would leave nothing to be desired.

Having, as I conceive, sufficiently described the capabilities of this fine inlet, I consider that I should be neglecting my duty as the responsible Surveyor of the Admiralty on this coast, were I to pass unnoticed some of the evidence that has been given before the Select Committee of the House of Commons on Harbours of Refuge—evidence that may prove highly injurious to ships navigating this coast, by tending to discourage them from seeking that shelter which Lough Swilly affords in those winds that are pronounced, very truly, the most dangerous.

It is stated by one who professed to be intimately acquainted with every part of the Irish coast, that "Lough " Swilly is not a place that you can run for at night, that " the Swilly Rocks are immediately in mid-channel, upon " which the *Saldannah* frigate was lost in 1818."

In contradiction to this assertion, I beg to remind the Commissioners that, instead of the Swilly Rocks lying in the mid-channel, they occupy only one-sixth of the narrowest part between the two shores of their locality, which are here three miles apart.

Secondly, the melancholy wreck of the *Saldannah* occurred on the night of the 4th December 1811, when no light marked the entrance to the Lough. Not one man survived to explain the circumstances of her loss, but the wreck was found at the southern point of Ballymacstocker Bay, and it was concluded that she had beat over the Swilly rocks, as a part of her chain was found there.

It was not till four or five years after this fatal catastrophe, that is, in 1816, that the light was exhibited on Fanad Point. Like most improvements on the coast, it was only purchased by a great sacrifice,—in this case, the loss of a frigate and all her crew. Had there been a light, it is reasonable to infer that this wreck would not have happened. It was not that she was unable to get in, for the position of the wreck proved the contrary; but her attempt under such circumstances was a hazardous one, and proved fatal, while her consort the *Talbot* kept the sea, and was saved.

Supposing a vessel to be half a mile off Fanad Point, the course up the Lough will be south-west, and should the wind be so far to the southward of west that she could not lie that course, it is then an offshore wind, and has consequently lost much of its danger.

A ship being to the west of Malin Head, and caught in a north-west or north-east gale can have no better asylum than Lough Swilly; out of which she can also beat at proper time of tide, when the weather was fit to proceed on her voyage.

I have deemed it expedient to dwell thus long on the qualifications of Lough Swilly, in the hope of being able to counteract the injurious misstatements in the evidence referred to.

There is no harbour between Lough Swilly and Foyle, including 30 miles of coast, where the tides are very strong, and the sea consequently very heavy.

There is, however, a very valuable roadstead in Culdaff Bay, sheltered from winds between north-north-west, round by the west to south-south-east, and having good holding ground.

The strong tides there run outside, but do not enter the anchorage, keep down the sea very surprisingly there.

Culdaff is nine miles north-west from the mouth of Lough Foyle, and affords a very useful stopping place for shipping when the wind is too far to the west for them to get in: and it so happens that as soon as the wind veers to the north-west, and blows into the anchorage, it becomes fair to enter Lough Foyle.

It would be far better for a ship to hold on in Culdaff Bay than to run far away to the eastward to find shelter, with the probability of having to beat back again.

In the summer season of 1857, when employed in the Admiralty survey of the coast between Loughs Swilly and Foyle, I made Culdaff Bay my principal anchorage; and only on one occasion was I compelled to get under weigh in the night when I run into Lough Foyle with a northerly wind. It is not sufficiently known to the coasting trade as it deserves to be; for when I was riding there in a strong west wind, five vessels seeing me there ventured in and anchored; but so many vessels had not been seen there at one time before.

I should observe, that although ships could not get into Lough Foyle with the ebb tide and a north-west wind, yet, if they can fetch under Inishowen Head, they may anchor between the lighthouses and Warren Point, close to the western shore.

LIMEBURNER ROCK.

This outlying rock (sometimes called the outer Frenchman,) having only two feet over it at low water, is the most dangerous feature of the north-west coast. It lies six miles north-west of Fanad Lighthouse, and 2¼ miles off shore, in the direct line of the coasters running to Lough Swilly. It is probable that ships may have been lost there without any record of the event. It is well worthy the effort of marking this danger by a conspicuous bell buoy. The position is certainly exposed, but the benefit that would result is well worth the trial.

In conclusion, I would observe, that as no evidence has been taken of the actual condition of the western coast of Ireland, its capabilities and deficiencies, I have here endeavoured to bring before the Commissioners the most essential wants, in the hope that some steps may be taken to supply them.

GEO. AUGUSTUS BEDFORD,
Captain and Surveyor,
North and West Coasts of Ireland.

APPENDIX, No. 10.

EVIDENCE respecting Harbours of Refuge taken at STRANGFORD LOUGH, on board H.M.S. *Banshee*, Friday, 17th September 1858, by Chairman, Admiral Hope, C.B.

BERNARD SMALL, builder, Ardglass, on being interrogated by Admiral Hope, C.B., made the following statement:—

I remember a pier being built at Ardglass by the Board of Works in the year 1827, or thereabouts. I worked myself at the pier, from the commencement till it was finished, as a foreman builder. We were about five years at the work. The first commencement was with a diving-bell, and we built as far as low water with good and sufficient material, which I considered was all perfectly safe and secure. From that on the top of the bell work we commenced to carry out the design of the pier, which, I think, was by Sir John Rennie. As far as the front and east end were concerned, I considered them also perfectly secure; but I consider that the whole fault and main cause of the pier tumbling was the bad construction of the battery (meaning the slope of the pier) or south side of the pier, which was principally owing to the bad material of which it was composed. The concrete of the south side was inferior, and not at all equal to the concrete of which the front and east end were constructed; and also, the material that formed the pavement was too light, and not fit to resist the sea. I also consider that the battery was extended too far, and had too great a slope, consequently it left none right upon the stones, so that one stone did not bear upon the other, and when the sea broke over the battery it washed them away. The battery stood for two years from the finishing of it till it was carried away, and at the present there is only the foundation work, which is very good. The Board of Works, about nine years ago, did a little towards repairing of it. The proprietor, Major Beauclerc, grandson of Mr. Ogilvie, who had become possessed of the estates, at that time gave a certain sum, which was supplemented by the Board of Works, to complete a certain portion of the pier at the south-east end, which the Board of Works was bound to carry out, but which it failed in doing. Consequently the old portion of the work that they were repairing, as well as the new, crumbled away.

On being further interrogated, he added:—

I wish to correct my former statement, that the Board of Works constructed the pier immediately. It was Mr. Ogilvie, the proprietor, and not the Board of Works, and his engineer was Sir John Rennie. I believe that the Board of Works took the quay into their own charge after it had been completed; and after the first breach had been made in the battery, the then proprietor, Major Beauclerc, applied to the Board of Works to repair the breach, as they were in duty bound. After many applications, it was several months before they sent a person down about it. Then they sent down a man to repair the breach; but my opinion is that he was quite incompetent for the purpose, for, in place of commencing in the proper way, by building it with stones in its original shape, he commenced with timber to stop the breach; and in order to carry out his design, he deepened the breach, and made a hole in the pier of about 30 feet deep, which left the pier exposed to the sea from every point, and immediately afterwards the quay came tumbling down. I gave him repeated warning of the danger of carrying out his design, but he would not take my advice, and the result was, as I had foreseen, the destruction of the quay. At the same time, a new lighthouse was being erected upon the pier opposite the breach, by the Ballast Board of Dublin, of which I was the contractor; and we had just completed it when it fell, in consequence of the depth to which the builder of the Board of Works had penetrated into the pier for his foundation. I am still of opinion, that, had a competent person came down from the Board of Works to make good the breach, it would have lasted a considerable time; but I adhere to my former statement, that the original construction was faulty, from the causes which I have previously stated.

APPENDIX, No. 11.

REPORT OF CAPTAIN DENHAM.

ARDGLASS, in a nautical point of view, presents the following inducements to render it a harbour of refuge:—

It is situated on that easternmost protrusion of the coast of Ireland, which, in a convex sweep of 30 miles, forms the first narrowing of the Irish Sea relatively with the Isle of Man and the Mull of Galloway, while presenting midway on its curve that salient cluster of dangers which all vessels to or fro' the southwestward in connexion with Belfast or the Clyde, have to round; these dangers are indicated by the "South Rock" lighthouse, and lie 10½ miles eastward of Ardglass; whilst that at 2½ miles westward of Ardglass is indicated by "St. John's" Point lighthouse, the eastern horn of that receding portion of the coast known as "Dundrum Bay."

Essentially necessary as those beacons are, they cannot wholly avert the difficulties into which vessels are drawn whose course up Channel along this coast upon an E.S.E. wind is diverted by the indraught of the Strangford estuary, so as to prevent her weathering the South Rock after passing Ardglass at six to eight miles offing; or that of a vessel proceeding down Channel on a S.S.E. wind, after weathering the South Rock, being headed even by one point of wind; which, together with the indraught of Dundrum Bay as she passes St. John's point, will be sure to involve her in the hopeless toils of that bay. These are predicaments too often experienced in this locality, where the tide of flood meets from the northward as well as the southward; so that the hope of reaching beyond the confluence, naturally adds to a reluctance to bear up on being met by an adverse spirt of wind, forty-five miles back to Belfast Bay, or retreat sixty-one miles to Kingstown Mole; a time-losing alternative, however, that can alone ensure safety if adopted in time; because not even a coaster is justified, at present, in looking to Ardglass as an asylum, although, in like circumstances, it would be lying but six miles under his lee; and where, if harboured at this stage of his voyage, he would have a fair departure directly the lee-shore wind moderated, and veered the couple of points he required in his favour.

The aspect of this trend of coast renders it a dead lee-shore upon a S.S.E. wind, which, though not a prevailing quarter, is often a violent wind, is an unsteady wind, brings down a heavy sea, and is, in winter season, frequently attended with sleet and a murky atmosphere; so that keeping the offing, unless luckily well over to the Isle of Man (30 miles distant), is fraught with perplexities and risks.

It must have been such considerations that prompted private efforts, at an outlay of some 16,000*l.*, increased by Government loan to 22,000*l.*, to cover the most available cove in Ardglass Bay from the aspect winds, by a succession of harbour works, that would afford refuge to a passing but baffled vessel, and to the fleets of fishing craft which congregate betwixt the Isle of Man and this part of the Irish coast from Arklow, Cornwall, and the Isle of Man, engaged in the herring, cod, and haddock fishery.

The harbour works in question were begun by the proprietor of the locality, Mr. Ogilvie, in 1812, and subsequently carried on by his heir, Major Aubrey Beauclerc, to the year 1836, under an Act 6th and 7th of George IV. cap. 80. Those works consisted first of a wharf and glacis, or sea pavement based upon the ledge of rocks which formed the natural beaching cove near Ardglass Castle, situated one-third up the western shore of the inlet called "Ardglass Bay." A lighthouse was established upon the extremity of this pier by the Ballast Board of Ireland. The obvious advantage to the Irish Sea fishery and coasting trade derived from works which merely sheltered in nine and six feet water half an acre of low-water area, suggested to the spirited proprietor, with the advice and after the design of the late Mr. Rennie, and eventually under the direction of Sir John Rennie, an extension of the first pier in the same line of direction, viz. due east at a right angle to the in and out trend of the main inlet, and parallel to the seaward aspect. This extension projected 245 feet into 17 feet water at low-water springs, and covered an additional acre of 15, 12, and 9 feet water.

The Ballast Board erected a suitable lighthouse upon this pier head, and pulled down the former inner lighthouse.

With this facility for entering the bay and rounding into the cove by night as well as day, and availing themselves of the quickly promulgated increased capacity of Ardglass as a haven, 210 vessels took shelter, some of 150 tons burden, within it, in the first year of its completion; and 400 to 500 fishing craft frequented it, and received in one year for herrings landed on the new quay 20,000*l.*

Unfortunately, in the second year (1838) of this local prosperity and important succour to the weather-driven mariner, as well as convenient market for the fish, which this part of the Irish Sea teems with, and which the surrounding population so much require; the new pier became breached by the sea of an autumnal gale at S.S.E., the Cheesehead became undermined, and with the lighthouse toppled outwards into 20 feet water, whilst the pier itself was swept into the haven, leaving a debris which comes above low-water level as much as 10 feet, where steamers berthed in 15 feet water just before.

This debris is urged by succeeding gales into the anchorage, and at this date has encroached upon the former berthage 110 feet, and thus contracting the entrance to the haven, and the space for rounding to, clear of the rocks to leeward, as well as destroying the only quay-room for lying alongside of at low water periods.

The debris in question has presented, since the prostration of the pier and lighthouse, a period of 13 years, an unbeaconed ledge of rocks, which protruding as it does towards the most projecting rock on the eastern side of the bay of Ardglass, reduces the fairway passage by hidden dangers to 100 yards, without any guide but a temporary light at the head of the bay, which can effect little more than indicate to the mariner in the offing that he is abreast of Ardglass Bay.

At the period of these new harbour works being demolished, they were under the care of the Board of Works of Ireland, the circumstances attending which are fully detailed in the appended documents.

Reverting to the inducements for rendering the inlet or bay of Ardglass a harbour of refuge, it is to be borne in mind that it is the only accessible place, at all stages of the tide, and not requiring a local pilot, between Kingstown Mole and Belfast Bay, a distance of 106 miles. It is not subject to any indraught or any appreciable effects of tidal set within it, or at its mouth. It has no bar or any detached sand-bank, or foul ground that can obstruct approach, or eventually affect its soundings by deposit.

It is easily to be identified by day, from its remarkable group of ancient castle towers, a modern tower upon its ward, and its church spire; and by night the coast lights (St. John's Point and South Rock) do not shut in with reference to the adjacent coast line until within half a mile of its own mouth, when its own light would be clearly in sight; while for hazy weather the soundings gradually shoal up from 33 fathoms (mud and shells) at ten miles off, to 15 fathoms (coarse sand) at three miles off, and 12 fathoms (sand and broken shells) at one mile off.

Ardglass presents to the engineer certain encouraging features; there is no disposition in its formation to silt up; it receives no outfall of land waters; its shores are not of a friable nature; it has exhaustless quarries in connexion with high-water mark, well adapted for submarine structure, the free use of which, as well as frontage, is already ceded by Major Beauclerk for such works, and abundance of cheap labour is at hand to work them. The discouraging points are the want of clear water space, where shelter has hitherto been coveted, viz. the "Castle Cove," and the heavy sea to be contended with; for in proportion as the bay of Ardglass is easy of access by presenting a wide-spread mouth in the eye of the on-shore wind, so is its whole area exposed to a heavy sea, to resist which, and to cover any portion, even the two acres of cove floating and beaching space already described, requires a massiveness of structure really of too costly a nature for the space it has to cover; because neither in space nor depth of water could it become, in the broad sense of the term, a "harbour of refuge." Such a term implies in these days a resource for any sized ship that may bear up for it, whether disabled, or to spare her gear under strong adverse winds.

Ardglass hitherto has only offered an asylum to the coasting class of vessels; its harbour works having been reared upon its inner and shoaler section of soundings, which does not afford more than 15 feet draught of water, and where in no part does the breadth exceed 130 yards from margin to margin at low water. This half of the bay (after passing Ardglass Haven) gradually shoals up to the strand at its head, where a dry harbour, called Kimmer's Port, has been constructed, and where Major Beauclerc is now forming a float dock to protect the dozen trading vessels, of 108 to 21 tons burthen, which belong to the port, and who, by choosing their time of tide, not earlier than three quarters flood, can approach Kimmer's Port unmindful of the overlapping fangs of rock which spring out from either side of this upper half of the bay. Kimmer's Pier is of much slighter construction than Ardglass Pier was, but as the weight of the wave is somewhat expended in its progress from the mouth of the bay, it sustains it well; but it partakes of that ebullition and run which is a characteristic of the bay of Ardglass, by reason of the inadequate area, compared with the width of its mouth, for the sea to exhaust itself; besides which the jutting rocks deflect it from side to side, and occasion the run and undulation which renders it dangerous to loaded vessels when taking the ground on the ebb, or beginning to float on the flood.

Doubtless much of this ebullition might be mitigated by removing certain portions of the rocky ledges which come above the surface, and no part would be more improved in space and tranquillity of berthing-water, as well as for beaching, than the cove near Ardglass Castle; therefore any estimate for restoring the now prostrate pier, scarping and lowering the rocks directly northward of the pier, or constructing a "spur" or "cheveron" on the opposite side of the bay, out from the Ardtole Rocks to the eight-feet ledge lineal yards[*] (which, as it would overlap the S.E. aspect of the Castle Cove Pier, would ward off the sea from that quarter, and likewise check the sweeping south-western sea), should form a prominent item.

Looking to the extent of refuge and commercial good which the pier and its lighthouse conferred, its present state is to be deplored; and from the experience that no ordinary structure can restore it (which, besides removing the debris, amounting to 2,288 cubic yards of rubble and masonry, two-thirds of which are submersed fifteen feet, though some of it might be used again), local means are not likely to be employed in that undertaking. The concerns of the harbour are vested in the hands of commissioners without resources beyond the harbour dues, which, with what Major Beauclerc lays out from day to day, scarcely preserves the original inner section pier and glacis from demolition.

It is under the lee of this former pier, with the debris of the new pier acting somewhat as a breakwater, that as many as one hundred and thirty-seven vessels per annum still take shelter, notwithstanding the operation of the harbour light is no longer to guide them up to and round the pier-head, but merely denotes when they are right off the mouth of the bay itself. This light is now exhibited from a stable loft window at the head of the bay, and is intended to throw its refulgence so definedly down the fairway of the bay, as to clear by its limits the ruins of the pier on the western hand, and the rocky fangs upon the eastern hand; but this never-yet-obtained object by a single light fails as usual here, for it is as apt to lead on to the dangers right and left as between them. The western margin of its refulgence intersects 150 feet of the pier debris. Indeed, the light placed as it is, not only fails in denoting a fairway direction, but imparts no notion of distance; so that a vessel has been known to run past the Pier Haven, right upon the strand at the head of the bay. In fact, no stranger can possibly avail himself of Ardglass Harbour in a dark night until the light is restored to its former site. This should be done by means of a pile structure on the extreme of the debris of the pier, or by rearing a light tower upon the foundation of the late Cheesehead, which bares two feet at low-water springs, and is in a fit state to receive a superstructure.

To show how available the harbour is by daylight (even to a stranger without a pilot) in its present unbeaconed state, it is only necessary to cite the case of H.M.S. *Comet*, as set forth in the appended Reports; since that steamer, in January last, bore up for Ardglass, "under the worst circumstances with respect to weather." The first time, not only had no one on board ever been there, but their chart indicated the existence of a pier-head and lighthouse, although both had ceased for the last thirteen years; nevertheless, they took up a safe berth, and after examining, during these two visits, the capabilities of the harbour, recommended it most strongly to the Admiralty Harbour Board as highly worthy of official attention, with a view to rendering it the *bonâ fide* harbour of refuge so much desired in this part of the Irish Sea.

Most nautical men will concur in this recommendation; and so far as this restoration of the harbour works can effect it, the Board of Works, it would seem, have only been waiting for funds for following it out; for we find the following passages in their statement of the matters concerning Ardglass to the Lord Lieutenant of Ireland, dated 11th of March, 1848:—

> "This Board is fully impressed with the value of
> " Ardglass Harbour, and still entertains the hope that
> " means may be provided for its restoration upon a
> " permanent footing. The cost of effecting this is
> " quite beyond the reach of any fund at present con-
> " nected with this department. It may be added that
> " in 1840 this Board, under the sanction of the Trea-
> " sury, offered to pay half of the cost of restoring the
> " harbour, provided the parties interested supplied the
> " other half, and also undertook the maintenance of
> " the harbour, which was declined."

Reverting to the extent those works were availed of by the coaster and fishing craft, and how the commerce of the district was promoted, all of which have been for thirteen years sustaining great deprivation, and observing that the haven, which was improved to a certain extent by private enterprise, and eventually completed by public funds under the government countenance and surveillance, became suddenly, through the instability of the outer and finishing section of the structure, a mass of debris of the nature of a half-tide reef of rocks stretching crosswise into former deep water; and that this dangerous obstruction is without beacon or light;—looking to these circumstances, it is obvious that the harbour of Ardglass is unfortunately in a worse condition than before the outlay of the recited 22,000*l.*, and that its works ought to be restored with the addition of the eastern side spur alluded to.

Ardglass itself stands in a position of commercial importance, inasmuch as it is only seven miles from "Downpatrick," the assize town of the county Down, which is distinguished by the industry of its population; but whose merchants, having been defeated in their attempts to establish steamers through the difficulties of Strangford Straits, are obliged to cart their goods from Belfast, a distance of eighteen miles, at ten per cent.; whereas they would (as they did in 1836-7) import them direct from England through Ardglass, more especially as a railway communication with Downpatrick has been agreed upon; this, with the connecting link of railway which the Belfast and County of Down line will present, will place Ardglass within one hour's transit of Belfast. Up to this point of view, the pretensions of Ardglass have been directed to purely commercial attainments, combined with an asylum for coasters and fishing craft. The practicability of rendering it a refuge harbour to the voyager under stress of weather may have been glanced at, but could never be entertained by local enterprise, because such can only be entertained at a consequent cost of projecting breakwater tongues, from the headlands which form the mouth of the bay, an undertaking too great for private funds, but certainly worthy of an appropriation of national funds.

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[*] In reference to the number of yards omitted above, as well as the whole arrangement of this Report, it is due to Captain Denham, now in the Pacific, to state that the copy now published is taken from a rough draught supplied by his family at the request of the Admiralty; when, by some very *untoward* circumstance, Captain Denham's Report, as delivered previous to his departure into Mr. Stafford's office, was *lost;* and would have remained wholly unseen by Sir James Graham and Lord Aberdeen, but for my having found (after my friend Colonel Dunne had moved for and obtained permission, in the House, for the reports of the surveyors to be printed) that Mr. Rendel's Report only had been struck off. This caused me to address the Admiralty on the omission of the chief document on which Mr. Rendel's Report was drawn up; when it was found that this valuable public paper was *missing;* and could not, therefore, have been read by those whose duty it was to propose the grant of 20,000*l.*, and to defend the measure against the factious opposition which was the cause of its postponement.—G. BEAUCLERC.

By such covering works, twenty-two acres of good anchoring ground, in from eighteen to forty-five feet water (*i.e.* equal to one-fifth of Kingstown Mole or the berthing of a dozen large-class ships, would be enclosed from all winds, leaving an entrance of two hundred yards width. This entrance would be free of any external dangers, on whatever line of direction, over one hundred and eighty degrees of offing-aspect it might happen to be approached upon; so that any vessel who found herself oppressed by the right-on sea, the turbulence of which is often increased by the turbulence of the Channel tides which meet in the vicinity, might unhesitatingly, without the aid of a pilot, bear up, and if of more than 12 feet draught, find instant anchorage in perfect shelter; or being not more than 12 feet draught, might proceed into the Castle Haven, where even the present ground swell would no longer exist.

Under such cover not only could the Castle Haven be restored by works at a very much less cost, because not half so massive as they must be if adapted to the present fetch of sea; but docks and other local facilities (which its 16 feet rise of tide, and shore feature, invites and favours) would doubtless be undertaken by the commercial interests around.

Thus by the Government adopting, in the way described, this only accessible inlet (without depending on tide, pilot, or daylight) on the coast between Dublin and Belfast, an anchorage would be afforded to the voyagers using this side of the Channel, and an incentive would follow for local enterprise to re-establish port-shelter and commercial facilities; whilst two other objects suggest themselves as worthy the attention of Government; viz., the eligibility of the port as a packet station between England and the north of Ireland. The inducement on this point may be stated thus,—the sea passage from Holyhead is but 13 miles or one hour's more steaming than to Kingstown, and without a single danger in the track.* The difference of the land journey to Belfast after the mails and passengers land at Kingstown would be three hours in advance if landed at Ardglass; or after deducting the additional hour's sea passage, a clear acceleration of from two to three hours would accrue in favour of Ardglass; indeed, the saving of time would amount to 10 hours, if the present system of detaining the mails at Dublin from 12 at night to 7 in the morning continued.

Then, as respects Liverpool, Ardglass lies 30 miles nearer to it than Belfast, say three hours less steaming, which, minus the one hour railway transit from Belfast, leaves Belfast two to three hours nearer Liverpool *viâ* Ardglass.

These accelerations equally advantage Londonderry, &c. The next adaptation which Ardglass suggests of a public nature is that of a military post. The confirmation of its circumjacent isthmus (with its dryness of soil and water springs) only require harbour means for safe berthing of transports, in case of desiring to land or embark troops and artillery when the wind is on shore, all presenting resources and capabilities for rendering it an important military depôt; indeed its castle remains, and its wards indicate that Ardglass was formerly a stronghold.

Recurring to the aspect of Ardglass Bay, it should be observed that its anchoring sound is even now sheltered from the prevailing winds; vessels frequently anchor in it under strong winds from west round northward to E.N.E., and the Castle Cove itself it only susceptible of sea from eight points of the compass, viz., S.E. by E. right on to the pier, and the deflected effects of sea brought in by the wind southward to S.W. by S. The centre of the sound faces S. ½ E., which is the bearing of Holyhead, distant 67 miles.

(Signed) H. M. Denham, *Captain R.N.*

December 1st, 1851.

No. II.—Ardglass Harbour.

Return (in part) to an Order of the Honourable the House of Commons, dated 17 May, 1853, for

A COPY of "Report of Captain *Denham* and Mr. *Rendel*, recommending the Restoration of Ardglass Harbour."

Admiralty, 19th August, 1853. J. W. Hay, *Castle Clerk.*

Report of *J. M. Rendel, Esq.*

8, Great George Street, Westminster,
17 May 1852.

Sir,

In the course of October last I had the honour to receive a letter of which the following is a copy:—

Admiralty Harbour Department,
15, Duke Street, Westminster,
18th October 1851.

Sir,

A question has arisen on the capability of Ardglass as a harbour of refuge, and it appearing desirable to obtain further and accurate information with reference thereto, I am commanded by the Lords Commissioners of the Admiralty to direct that you proceed to Ardglass, and in company with Captain Denham, R.N., examine and report on the subject, for the information of their Lordships.

I have sent herewith plans of the harbour, and the Irish Channel, and the papers having reference to the case have been transmitted to Captain Denham.

I am, &c.,
(Signed) J. H. Hay,
Pro Sec.

J. M. Rendel, Esq.

In consequence of these instructions I met Captain Denham, R.N., at Ardglass, on the 24th and 25th October last, and proceeded in company with him to make a survey of the present harbour, and also of the coast from Coalman Head to Phenic Point, together with its sea approaches.

This survey showed that it would be necessary to make a complete chart of the present harbour, so as to determine the amount of stone and other rubbish lodged therein by the destruction of the pier and lighthouse, to enable Captain Denham and myself to make the required report as to the capacity of Ardglass as a harbour of refuge.

This duty was undertaken by Captain Denham, and the accompanying plans and drawings will show how completely he performed it. Such detailed surveys at a rather unfavourable season of the year necessarily occupied a considerable time, but Captain Denham completed them, and sent them to me with his report in the month of December.

Since that time I have had the engineering points of the whole case frequently under consideration, but the questions I had to decide upon, whether regarded in their private or public bearing, could not be hurriedly determined, and hence the delay which has taken place in my submitting this report.

Captain Denham has so fully reported on the history of Ardglass Harbour, the advantages of its position as a harbour of refuge, the dangers of the coast, the benefits which its restoration would confer on the whole of the north of Ireland, and its importance as a commercial port and packet station, as to make it unnecessary for me to touch on any of these nautical points. I shall therefore pass at once to the consideration of the plans which appear to me, as an engineer, best calculated to accomplish the objects to which he has drawn your attention.

To make Ardglass a harbour of refuge, in the extended sense of the term, it would be necessary to form breakwaters from Coalman Head on the west, and from Phenic Point on the east. Between these two points, which bear east and west of each other, the distance from the low-water mark is about 1,900 feet. Within these points is a funnel-shaped creek of about 2,400 feet in length, having nine fathoms of water at low water of spring tides in the deepest part, but with rocky and serrated shores on each side, giving rise to small bays, in the largest of which, on the west side, the present harbour is situated.

The low-water area within the headlands does not exceed 55 acres; but high water of spring tides covers an area of upwards of 100 acres.

The portion of the creek which forms the present, or rather the old harbour, having 10 feet of water and upwards at low water of spring tides, gives a sheltered anchorage of 17 acres; but this is exclusive of Castle Cove, which forms a convenient harbour for coasters and fishing craft.

Now, these 17 acres of anchorage for vessels drawing from 9 to 17 feet, and Castle Cove, about 6 acres, adapted to smaller vessels, may be sufficiently protected by the restoration of the fallen pier and lighthouse; but if more accommodation be required, it can only be procured advantageously by the breakwaters before mentioned.

The question to be decided, therefore, seems to be whether the benefits to be obtained by such breakwaters will warrant the expenditure of the sum of public money requisite to complete them in a durable and efficient manner.

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* Captain Denham, I believe, has overstated the distance. The following are the distances of the different lines on the chart of Mr. Wild, of Charing Cross; and he is esteemed high authority on such matters:—Holyhead to Kingstown, 67 miles; Holyhead to Ardglass, 77 miles; Holyhead to Belfast, 124 miles; Liverpool to Dublin, 137 miles; Liverpool to Ardglass, 124 miles; Liverpool to Belfast, 165 miles.

The annexed plan shows the position and extent of the work, also the area to be enclosed and sheltered; and the depth of water within it.

It will be seen that the west breakwater is 1,050 feet long, projecting from Coalman Head in an E.S.E. direction, and formed in water varying from three to nine fathoms of water at low water of spring tides; that the east breakwater is proposed to be run off from Phenic Point in a W.S.W. direction, or with its head slightly covered by the head of the west breakwater, and distant from it 450 feet. This east breakwater is 650 feet long, and would be formed in water varying from three to eight fathoms, at low water of spring tides.

Taking advantage of such stone as the locality affords for the submerged parts of these breakwaters, but employing limestone or granite for the sea faces above low water, I estimate the cost of forming them at 240,000*l.*, and the time occupied in completing them at five years from the opening of the quarries from which the stone is to be procured.

By the expenditure of this sum, the public would secure a safe refuge harbour of about 35 acres, having from three to nine fathoms of water at the lowest ebbs, in what is reputed to be excellent anchorage ground, with only one small rock to be removed, if necessary, having but 2¾ fathoms upon it.

The estimate is based upon the well-known exposure of the coast, and the heavy sea which the works would have to encounter. It also includes the cost of lighthouses, and a breastwork or parapet for the whole length of each breakwater.

Should it be decided that works of the extent before named are not at present desirable, then I have strongly to recommend the restoration of the pier and lighthouse, which were washed down by a gale in the autumn of 1838.

The cost of this, with the detritus of the former pier, which now contracts and endangers the present harbour, I estimate at 20,000*l.*; the works being executed in such a manner as would make them secure in future.

It would greatly add to the security and usefulness of the port if some of the rocks within the pier could be removed; but I do not consider it necessary to spend money on objects of this kind till the pier is restored, and the effect it has on the harbour duly recorded.

It might also be desirable to dredge out a portion of the old harbour of Castle Cove, so as to increase the depth of that sheltered part of the harbour; but this, though necessary if Ardglass is ever to become a packet station, is not requisite for its restoration to its original condition.

I have to remark that there seems no tendency in the harbour to silt up, the coast being formed of hard rocks, free from sands, and there being no river emptying itself into it.

If the breakwaters are built, the cost of reconstructing the pier will be reduced by 8,000*l.*, and will then be made not only an inner shelter, but also a wharf for trading vessels.

The several plans and drawings sent herewith will show the deplorable condition in which the present harbour now is; and in conclusion I have again to state, that this seems a case for the favourable consideration of their Lordships in devising some means for its early restoration, if not for its enlargement and conversion into a harbour of refuge.

I beg to return with this report the several papers forwarded with their Lordships' letters of instruction.

I have, &c.
(Signed) James Rendel.

Augustus Stafford, Esq., M.P.
&c. &c. &c.,
Admiralty.

No. III.

Copy of the Preamble of an Act of Parliament of the 7th and 8th year of the reign of George IV.

Cap. LXXX., intituled

An Act for maintaining and improving the Harbour of Ardglass, in the county of Down. [14th June, 1827.]

Whereas various sums of public money have been, from time to time, granted by Parliament, and laid out in improving the Harbour of Ardglass, in the county of Down, in Ireland: And whereas William Ogilvie, Esquire, the proprietor of the said harbour, claims to be entitled to the receipt of certain customs or duties upon vessels entering and using the said harbour, under the name and description of Castle Maize and Castle Fish, all which duties and customs, and all other duties and rates, payable to the proprietor of the said harbour, the said William Ogilvie is willing to relinquish, and that the same should be abolished in order that a more effectual provision may be made for the maintenance and improvement of the said harbour, for the benefit of the Irish Fisheries: Be it therefore enacted, &c. &c. &c.

No. IV.

Sir, Treasury Chambers, 8th July 1853.

With reference to your several memorials on the subject of the restoration of Ardglass Harbour, I am commanded by the Lords Commissioners of Her Majesty's Treasury to acquaint you, that, after a full consideration of the circumstances, my Lords have given directions for the preparation of an estimate to be submitted to Parliament, in the present Session, for the sum of 20,000*l.*, for the restoration of the pier and lighthouse at Ardglass, according to the plan of Mr. Rendel.

I am, sir, your obedient Servant,
James Wilson.

To Capt. G. Beauclerc,
23, Grosvenor Street West, Grosvenor Place.

APPENDIX, No. 12.

Admiralty Survey, Warrenpoint,
Sir, 18th September, 1858.

In addition to the evidence that I had the honour of giving before the Royal Commissioners on the subject of the improvement of Lough Carlingford, I beg to submit a brief account of the wrecks that occurred near the bar during a south-east gale in April last, as I think they forcibly illustrate the benefit that would be conferred by making Lough Carlingford more easily accessible.

The *Mary Stoddart* barque, bound to Glasgow, was seen off the bar at daylight on the 6th April, with a signal of distress flying, the wind, a gale at east-south-east, with too much sea for a boat to go off to her. She was subsequently boarded by a steamer, and brought up in Dundalk Bay, where she drove on shore, and became a total wreck, with a loss of eleven lives, including those who perished in their efforts to render her assistance.

The Spanish brig *Triton*, from Liverpool, a total wreck on the 7th April, six miles east of the bar, seven men lost.

The English barque *Sylvia*, from Liverpool, total wreck at Newcastle on the 7th April, twelve hands last.

A Welsh sloop, total wreck two miles west of the bar, three men lost.

The American barque *John Duncan*, cut away main and mizen masts, and rode the gale out off Dundrum Bay.

A Belgian barque cut away lower masts, and rode it out off Carlingford Bar.

In one gale four vessels totally lost, with 33 lives, and two vessels with loss of lower masts, and it is not too much to say that in all probability the whole would have been saved, if the harbour of Carlingford had been accessible to them.

I have, &c.
R. Hoskyn,
Master R.N.,
in charge of Survey.

To the Secretary to the Royal
Commissioners on Harbours
of Refuge.

APPENDIX, No. 13.

Report of the Committees appointed by the Town Council and the Harbour Commissioners of Wexford, for the Consideration of the Royal Commissioners on Harbours of Refuge.

The geographical position of the harbour of Wexford and its bays is a most important one, and if the advantages that position naturally gives her were duly considered, and her capabilities were fairly developed, it would become of the highest national importance.

In the first place, Wexford being only forty-two miles distant from the opposite coast of Wales, offers the shortest and quickest route to the south of England and to London, and consequently is the best position for a packet station to effect that purpose.

Secondly, its position in a commercial point of view is no less important, inasmuch as it is an undisputed fact, that more vessels, both home and foreign, pass Wexford than any other part of the United Kingdom, with the exception of the Downs. This circumstance, as also the dangers to which vessels are liable during this portion of their voyage in bad weather, points to the necessity of establishing at least, an auxiliary Harbour of Refuge at Wexford, or in its immediate vicinity. Without this being done, the trade both up and down the channel can never be secure; for, no matter what expense may be gone to in distant places, unless the refuge is placed within easy reach of the danger the same melancholy loss of life and property will annually recur as heretofore. At present there is no harbour for vessels in distress to resort to on the Irish coast between Kingstown and Waterford, nor on the Welch coast south of Holyhead, except Milford. The distance is so great to both those harbours from the dangerous portions of the coast of Wexford County, and from Tuskar lighthouse, which is a point all heavy and other ships make for in going either up or down the channel, that those ships when in distress at this part of their voyage prefer beating up and down the channel rather than incur the danger and delay of running for either of those ports. Many vessels, in consequence, have been lost, which would have been saved if there had been an auxiliary safety harbour at Wexford, or in its immediate vicinity.

If the harbour of Wexford itself could be so improved as to make it answer this purpose it would be much preferred. Otherwise, such a harbour to answer the purposes of a packet station and auxiliary safety harbour could, at moderate expense, and with certainty, be constructed at Ballygeary, in the south bay of Wexford. Nature has almost formed it already, and it only requires the aid of art to perfect it for the desired purpose.

It would be easy of entrance in any wind, or at any state of the tide. A deep channel, called the Shears, runs right from Tuskar into its mouth; so that a vessel once at Tuskar could, by that light, steer straight into the entrance, and if that was properly lighted, either by a small lighthouse or light ship, no stranger could miss it. A harbour at Ballygeary would be sheltered on many points of the compass, and the only winds from the unsheltered points would actually assist a vessel to make the harbour. Also a vessel could without difficulty sail out of this harbour, or the south bay, when she pleased. The anchorage at Ballygeary and in the south bay is first rate. It is all a stiff marl bottom; so that, unless the anchor or cable broke, no vessel would drive; and numberless instances have occurred of vessels, some of them of large burden, having been saved by running into the south bay, and riding out the gale in safety there and at Ballygeary. Had those vessels attempted to run for either Waterford or Milford at such time, or kept the open sea, in all human probability, they would have perished.

There is another reason why the Government should favorably view this proposed harbour, and assist in its construction. It lies near the extensive fishery grounds on this coast, which abound with the best kind of fish; but from the present state of harbour accommodation, the fishermen of Wexford cannot at all times take advantage of those fisheries, nor can they keep the proper class of boats to enable them to remain out in rough weather, and their exertions are cramped, and their numbers are diminishing. The youths of Wexford are intelligent, hardy, and fond of a seaman's life; and if the fisheries of this port met proper encouragement, which the proposed harbour would afford them, a valuable nursery for the Navy of Her Majesty would be established here.

Finally, there are large quarries of stone within easy distance of carriage by water or land, for the construction of the harbour, and should that material not be approved piles might be used, as is done in many other important harbours.

APPENDIX, No. 14.

To the Honourable Commissioners of Safety Harbours, &c. &c. &c.

GENTLEMEN,

WE, the undersigned, think it expedient to bring under your notice the following facts respecting Kilmore Pier, in the county of Wexford:—

That about sixty-five years ago a small pier was built at Kilmore, by local subscription, as it had long been considered that a pier there there would not only provide safety for and encourage fishing vessels, but also afford shelter to ships in distress; and, further, that such a pier would be of incalculable advantage to the agricultural interest of the locality, by enabling them to ship their produce at Kilmore, and import coals, culm, timber, and all necessary articles.

That the necessity of a pier at Kilmore became more apparent annually.

That in the year One thousand eight hundred and forty-eight Mr. Harper, agent for Lloyd's Underwriters at Wexford, wrote the following letter to Mr. Bolton, land agent of Kilmore neighbourhood, viz.:—

SIR, Wexford, 1st May 1848.

IN compliance with your desire, I enclose a List of such Vessels as were lost near to Kilmore Quay within the last 10 years. Should a proper pier be made there, with about six to eight feet water at low tide, it would in some instances be a great advantage to the fishery, as a large class of boats could be kept there that would answer to fish on the Nymph Bank, where fish could be got nearly as plenty as on the banks of Newfoundland, and the small boats be always afloat to take the advantage of any fine day in winter. It would also afford shelter in a temporary way in case of getting off vessels stranded near to it, that would not be much injured, and no doubt be some advantage to the locality.

I am, &c.

George W. Bolton, Esq. F. HARPER.

P.S.—If you wish to address the underwriters at any time, William Dobson, agent for Lloyd's in London, Thomas Court, Underwriters' Rooms, Liverpool, and William Ewing, Esq., Royal Exchange, Glasgow, will be the parties you should write to.

Spring 1839. The *Bilina*, timber laden, on the Burrow, Ballyteigue, about a mile up, was wrecked.—Same time, a schooner, from Cork to Newport, about 20 perches from the quay.—5th September 1839. *Files Pinsamento*, a Spanish vessel.—21st January 1840. *Eliza and Abbey*, a ship two miles up on the Burrow.—26th January 1842. *Urania*, of Malta, at Saltee Island.—15th December 1843. *Vermont*, of Boston, close to quay.—13th January 1844. *Santon*, of Liverpool, three miles up on the Burrow.—9th October 1846. *Templemore*, of Liverpool, near to quay, was got off, and lay at the quay some time.—19th December 1846. *Macao*, of Coleraine, near the quay, was got off.—26th January 1847. *Niobe*, of Boston, in Ballyteigue Bay, at the Kisogh Islands, about six miles from quay.

That the proprietors and occupiers of land in Kilmore locality did then apply to the Commissioners of Public Works to erect a pier at Kilmore, which application was signed by the Members of Parliament for the county Wexford, by several other influential persons, and by the fishermen of Kilmore, there being at this period 24 first-class and 33 second-class fishing boats at Kilmore, but their employment was quite precarious, owing to the want of a pier, although Captain Washington, F.R.S., Lieut. H. F. Sewell, R.N., and other competent persons, have reported most favourably of Kilmore as a fishing station, and capable of supplying Wexford and the adjoining counties with abundance of fish, besides contributing materially even to the supply of Dublin market, as the Nymph Bank lies immediately outside of Kilmore.

That on this occasion the Commissioners of Public Works granted, under the 10th and 11th Victoria, chapter 75, 4,000*l.* to build a pier at Kilmore, to which sum was added 2,000*l.*, raised by assessment on the lands adjoining Kilmore, but the whole amount, 6,000*l.*, has been quite insufficient to complete the pier, nor even to clear the main line of approach to the harbour of several large boulder stones, dangerous to life and property, the removal of which has since been effected, partly by a contribution of the landed proprietors and occupiers of the neighbourhood. The Royal National Life Boat Institution are now about to erect a boathouse, in order to send a lifeboat to Kilmore.

That the necessity and advantage of extending this pier is beyond doubt, and has been explained in Memorial to the Lords of the Treasury in 1852, of which we beg to enclose a copy, with copies also of some letters of the officers of the Admiralty and Board of Works relating to the utility of Kilmore Pier, the extension of which we beg to recommend most strongly to the consideration of the Commissioners of Safety Harbours, and we fully concur with the views stated to the Lords of the Treasury.

We have been informed by good authority that about 12,000*l.* would make Kilmore Pier replete with advantages. We think it a matter well deserving your consideration, and hope that a work on which such a large sum has already been expended may not be abandoned, and left nearly useless.

Your obedient servants,
(Here follow 56 signatures.)

8th December 1858.

APPENDIX, No. 15.

ISLE OF MAN.

An ACCOUNT of the NUMBER and TONNAGE of FISHING BOATS, belonging to the Isle of Man, employed in the Herring, Cod, and White Fisheries, in the Year 1858, and of the Number of Men and Boys by whom the same are manned; together with the Value of the Boats, Nets, and Lines so employed.

Divisions of the Island.	Number of Boats in Classes.			Total Number of Boats and Tonnage.		Number of Fishermen and Boys.	Value of the Boats.	Value of the Nets.	Value of Lines used.	Total Value of Boats, Nets, and Lines.
	Herring Boats 30 Feet Keel and upwards.	Cod Boats from 18 to 30 Feet Keel.	Third-class Boats under 18 Feet Keel.	Number.	Tonnage.					
							£	£	£	£
Douglas	—	35	70	105	245	340	630	—	750	1,380
Port St. Mary	85	33	46	164	1,741	690	9,500	8,700	860	19,060
Peel	130	25	32	187	2,420	960	14,520	14,300	720	29,540
Ramsey	7	30	60	97	329	350	1,100	700	600	2,400
otals	222	123	208	553	4,735	2,340	25,750	23,700	2,900	52,380

	No.	Tonnage.	Men.	Value.
In addition to the boats *belonging* to the Island, as above, there are about 300 boats from England, Ireland, and Scotland, which attend the Manx herring fishing, the tonnage and value of which, with nets, &c.	300	3,600	2,000	£ 45,000
There are also 120 smacks belonging to Isle of Man, England, and Ireland, usully attending the herring fishing, carrying fish in a light salted state to various places in England, Wales, and Ireland; and these 120 vessels average 4 voyages inwards, and 4 outwards, during the season	120	3,000	470	27,000
To which add the boats, &c. *belonging* to Isle of Man, as above	553	4,735	2,340	52,380
Total number of boats and vessels, tonnage and men, and value, *employed* in Isle of Man fisheries	973	11,335	4,810	124,380

About 400 herring boats and smacks frequently rendezvous at Peel and Port St. Mary, more frequently at the latter, while the harbours of either can only accommodate about one half of such a fleet; and with stormy weather and adverse winds there is no protection outside.

There is a considerable tonnage employed in carrying herrings from Douglas not included in the above statement; some 20,000 maise being carted overland from Peel and Port St Mary, and despatched by steam vessels to Liverpool.

AT. SUTHERLAND,
Fishery Officer.

Fishery Office, Douglas,
23d September 1858.

APPENDIX, No. 16.

Treasury Chambers,
20th August 1858.

SIR,

I AM commanded by the Lords Commissioners of Her Majesty's Treasury to acquaint you that my Lords deemed it expedient to await the appointment of the Refuge Harbour Commissioners before answering your memorial of the 5th April last, addressed to the Earl of Derby, and that they have referred the memorial in question to the Commissioners, with a view to a full investigation of the whole subject when they shall visit the Isle of Man.

I am, &c.
G. ARBUTHNOT.

The Chairman of the
Committee for the Erection of a Pier
at Port Erin, Isle of Man.

To the Right Honourable the Earl of Derby, First Lord of Her Majesty's Treasury, &c. &c. &c.

The humble Memorial of the undersigned Committee for obtaining the Erection of a Pier at Port Erin, on behalf of the Inhabitants of the Isle of Man connected with the Fishing Interest,

Showeth,

THAT your Memorialists respectfully call your Lordship's attention to the present unprotected state of the natural harbour of Port Erin, situate on the western coast of the island, and, though there has never been a shilling expended upon it for improvement, it is, from its great natural advantages and situation near the fishing ground, the resort of all the fishing vessels in the channel for the greater part of the fishing season.

That there are from eight hundred to one thousand vessels, manned by six thousand men and boys, annually engaged in the herring fishing off Port Erin, and there is no port for the shelter of those vessels nearer than Peel, a distance of twelve miles, or Port St. Mary, to which there is a dangerous and difficult passage around the Calf of Man, the whole line of coast between those places being of a rocky character, affording no shelter whatever, and as the fishing vessels are frequently driven off the fishing ground, many lives and vessels have been lost while attempting to reach those ports.

That from fear of risking those dangerous passages, and of their being unable to return to the harbours of the island in case they put to sea, the vessels are kept in port for many weeks (while the sea is alive with fish), whereby their owners and crews annually sustain an immense loss, which your Memorialists conceive would be avoided if there were a deep-water harbour at Port Erin; the fishermen "declaring "that if they had shelter at Port Erin, they could take "twice the quantity of fish in the season."

That the bay has deep water, affording good anchorage ground, and large numbers of trading vessels shelter therein. More than five thousand vessels—four thousand of them to and from Liverpool—pass the Calf of Man lighthouses in the daytime during the year; forty vessels at a time frequently lying off the bay, waiting wind to round the Calf.

That several engineers have recommended that a pier should be erected at Port Erin, and Captain Vetch, of the Admiralty, who lately visited the place, estimated the cost of a suitable pier at the sum of 15,000*l*., and from its importance to the fisheries and trade of the United Kingdom he recommended that it should be undertaken by Government, as a national work, "stating that nature had done "three fourths of the work, and that the proposed pier "would make Port Erin not only the best harbour in the "island, but one of the best and most perfect deep-water "harbours in Great Britain," and capable of sheltering not only the herring fleet at all times of the wind and tide, but also merchantmen, smacks, and other vessels.

That the persons engaged in the fishing are so convinced of the necessity of the work that they have subscribed nearly 1,000*l.* towards the erection of the pier, such subscriptions being from upwards of five hundred persons; and at a numerous meeting of fishermen lately held, a resolution was passed that Government should be solicited to erect the proposed pier at Port Erin, and impose a duty of two pounds per season on each fishing vessel, and proportionate charges on the trading vessels entering the harbour, until Government be reimbursed for the outlay thereon.

That, from the long connexion of your Lordship's family with the Isle of Man, your Memorialists are encouraged to look with confidence for your Lordship's support in a measure which would so much increase the prosperity of the island; Memorialists being persuaded that the representative of their ancient kings still takes a lively interest in the welfare of the Manx people, by whom your Lordship's name is cherished.

Wherefore your Memorialists humbly pray that your Lordship would use your powerful influence to obtain the erection by Her Majesty's Government of a pier at Port Erin, on the plan recommended by Captain Vetch, on the terms herein mentioned, or upon such other favourable terms as to your Lordship may seem most for the advantage of the fisheries and trading interest. And your Memorialists will ever pray.

(Signed by the Committee.)

5th April, 1858.

APPENDIX, No. 17.

Isle of Man, 9th October, 1858.

PEEL HARBOUR IMPROVEMENT (ISLE OF MAN).

HAVING attended a public meeting held by the Royal Commissioners on Harbours of Refuge, at the Court House, Douglas, on the 17th September last, and on behalf of the people of Peel having made application for assistance towards the completion of a breakwater for the protection of the harbour there, and given evidence of the necessity of such a work, and being subsequently re-called, and having undertaken to procure information, and to give answers to certain questions put to me by W. S. Lindsay, Esq., M.P., I now beg, in compliance with that undertaking, to subjoin the sought-for information.

One point to which my attention was directed, and the first question on which I was requested to give an answer, was to the following effect:—Whether, in the event of the Government contributing a sum sufficient to complete the breakwater, as suggested, in addition to the 6,000*l.* voted by the Insular Legislature, the fishermen of Peel would consent to the annual payment of 2*l.* per boat?

In order to ascertain the general sentiments and opinions of the fishermen on this point, I called a public meeting in the town, on the evening of the 4th October, and to which I specially invited the attendance of fishermen and boat-owners.

The meeting was most numerously attended, and, after the subject had been fully discussed, the fishermen unanimously adopted a resolution, or rather a declaration of their views, of which the following is a copy:—

"The fishermen of Peel having maturely considered the question brought before them by the High Bailiff, cannot accede to the imposition of a rate, as suggested, for the following amongst other reasons:

"1. That Peel being one of the established harbours of the island, free to vessels of every class and from every country, stands in an entirely different position to the case of any other locality, however suitable the same may be as a site for a harbour, but where everything would have to be done to give it the full conveniences of one.

"2. That the abolition of all harbour dues in the year 1844 being universally acknowledged to have been a great boon, not only to the fishermen (who were thereby freed from an annual rate of fifteen shillings per boat), but to all vessels frequenting the ports of the island, the fishermen of Peel consider that it would be impolitic in them now to consent to, much less to ask for, the reimposition of a rate such as that suggested.

"3. That such a tax (for in reality it would be one) would be bad in principle, inasmuch as special provision is usually made in Acts of Parliament, exempting boats actually engaged in fishing from payment of light and other dues, thereby showing that one of the great objects of legislation is to encourage the fisheries, and leave those who follow that occupation as unfettered and free from payments of all kinds as possible.

"4. That the rate would be partial and unequal in its operation, for the same amount would be leviable upon boats that would avail themselves of the protection afforded by the breakwater for a few days or weeks (and in some cases English and Irish boats only remain a very short time) as upon those boats that would enjoy the protection during the whole fishing season, averaging four months.

"5. That it would partake of the character of a class taxation. In explanation of this, it is necessary to state, that although the protection of the fisheries was made, and is the strong ground upon which Peel rests its claim upon the Government for assistance towards the completion of a protective, accessible, and deep-water harbour, still the trading and coasting vessels belonging to and frequenting the port merits some consideration.

"There are 51 trading vessels belonging to Peel, varying from 20 to 120 tons. The number of laden and windbound vessels that entered the harbour during the year 1847 was 485, whilst a very large number took shelter in the bay, being unable to get into the harbour in consequence of want of room.

"Had the proposed breakwater been in existence no reasonable doubt can be entertained but that very many of these several vessels would have availed themselves of its protection, and that upon its completion a much larger number of vessels will, in stress of weather, run to Peel to seek its shelter, and, as a matter of course, use it without payment of any portion of that impost which is sought to be thrown entirely upon the fishermen.

"6. That it would be injurious to the interest of the place as boats from the surrounding shores would endeavour to avoid Peel, and frequent some other established harbour of the island, where they would be free from the imposition of any rate or duty.

"7. That the proposition is objectionable, and would be highly anomalous in other respects. For instance, the present harbour is free; upon the breakwater being carried out, by means of the grant of 6,000*l.* already voted from the insular funds, to the extent of even 300 feet, the shelter that such portion would afford would necessarily be free also whereas for the increased shelter that would be afforded by the extra 300 feet is suggested should be paid for, and that too by the fishermen.

"Again, the expense and inconvenience that would necessarily attend the levying of a rate, the constant bickering and disputes that would inevitably ensue from its exaction, and the heavy amount named, combine to render it, in the opinion of the fishermen, most detrimental to their interests.

"On the whole, the fishermen, having ever been impressed with the belief that the encouragement and protection of the fisheries has invariably been most favourably considered by every liberal Government, and that the most fostering care has always been attached to them as a class, prefer leaving their case, strong as they believe it to be, upon its own merits, than by any act or consent of theirs to draw down not only upon themselves, but upon their fellow-labourers from other parts of the island, and from the surrounding shores, a burden which would fall heavily upon them, and upon those who may follow in their steps for years, and would be attended by the many evils before referred to.

"And, in conclusion, the fishermen, having every confidence that the Royal Commissioners will, upon full consideration of the subject, and upon being satisfied (as they trust they have been, not only from personal inspection of the place, but from the evidence adduced) that a very great amount of good, in the nature of a protective harbour, can be effected at Peel, at comparatively a very trifling outlay, recommend the expenditure of such a sum, in addition to the 6,000*l.* already voted, as will be required to carry out the breakwater at Peel to the extent originally proposed, namely 600 feet, and that, without fettering it with any condition as to the payment of a rate or duty."

The next question to which my attention was directed was, to ascertain the number of wrecks that had occurred in the neighbourhood of Peel, with particulars of loss of life, within the last few years.

From information afforded me by the officers of the Customs department at Peel, I find that since the year 1852 there have been five total wrecks on the coast, with a loss of thirty lives, the particulars of which will appear in the annexed schedule.

The harbour-master of Peel (Mr. Robert Kerruish) has placed a statement and calculation made by him in my hands, and of which, as it bears upon the subject, I trust it may not be considered out of place in my giving an abstract.

The number of fishing boats arriving at, and entering into the harbour at Peel, weekly, during the fishing season, extending over the period of eighteen weeks, for the last five years, averaged 250, making with their repeated voyages a total of 4,500 vessels, and a tonnage of 76,500, and entirely exclusive of laden and wind-bound vessels.

Robert J. Moore,
High Bailiff of Peel.

To the Royal Commissioners on
Harbours of Refuge.

Schedule.

List of Vessels Wrecked in the Peel District, from the Year 1852 to the Year 1858.

Date.	Vessel.	Port.	Tons.	Cargo.	Whither Bound.	Where Wrecked.	Lives Lost.
1853	"Lucy"	Liverpool	1,129	Salt	North America	Ballaugh, eight miles north of Peel.	—
1857	"Fleece"	Arbroath	300	Grain	France	About two miles off Contrary Head.	10
"	"Mary Houghton"	Liverpool	70	Grain	Ireland	Michael, six miles north of Peel.	5
"	"Earl of Carrick," S. S.	Ayr	150	Pig iron	Liverpool	Niarble, three miles south of Peel.	14
1858	"Duke of Richmond"	Newry	25	Coals	Porta Ferry	Whitestrand, two miles north of Peel.	1
—	——	——	1,674	—	——	——	30

Several vessels have been driven ashore at Peel, but have been got off again with damage.

APPENDIX, No. 18.

To Her Majesty's Commissioners on Harbours of Refuge.

The humble Memorial of the undersigned Inhabitants of Port Saint Mary, in the Isle of Man, Fishermen, and others interested in the Trade of Port Saint Mary aforesaid,

Showeth,

That your Memorialists beg leave to request your attention to the present unprotected state of the Bay and Harbour of Port Saint Mary aforesaid, and the importance of measures being adopted for the security of the shipping which resort thither.

The bay and harbour are especially exposed to the south and south-east winds. Formerly considerable protection was afforded by the rocks on the south side of the bay, but during the last twenty years quarrying has been carried on there so extensively, and so much of the stone has been removed, that whilst the winds above mentioned prevail, there is now (as was not formerly the case) such a heavy swell or roll in the bay as to endanger the vessels anchored therein, and the run in the harbour is such as to render the vessels there unmanageable. A considerable part of the village will be in danger from the incursions of the sea if the quarry continues to be worked, and no protection made to supply the place of the natural protection of the rocks which are being removed.

Port St. Mary, as well on account of its natural advantages, as on account of its being the nearest port in the Island to the principal fish markets in the United Kingdom, has long been the chief resort of the Herring Fishing Fleet, the number of vessels there daily, being, from three to six hundred, the crews thereof amounting to about four thousand nine hundred men, and the value of such vessels, with their nets, amounting to about One hundred and fifty-six thousand pounds. The average quantity of herrings sold in the bay during the last ten years was 35,000 mease per year (there being 620 herrings in a mease), the quantity in the season of 1857 alone being upwards of 40,000 mease, the average value thereof being 1*l.* 3*s.* per mease.

The greater portion of the fish are taken away on the same day on which they are caught, from the Bay of Port St. Mary by Manx, Irish, Welch, and other smacks or fresh buyers, and great inconvenience and danger is occasioned by the heavy roll on the bay during the conveyance of the fish from the fishing luggers to the vessels of the buyers.

The present harbour is quite insufficient for the accommodation of vessels connected with the fishing trade of the port, as such harbour will not contain more than seventy luggers during neap tides, and from one hundred and fifty to two hundred during spring tides; these numbers respectively completely filling the harbour, and they being but a small portion of the vessels requiring harbour accommodation, the greater part of which are compelled to remain in the bay, and thereby, very frequently, great inconvenience, difficulty, and danger, are occasioned, as in case of a change of wind or a storm, the vessels are entirely without protection.

It is further of consequence that the fishing vessels should have accommodation as near as possible to the fishing ground, as much time is lost by the vessels being obliged to run to distant ports, and there is no port on the whole coast so conveniently situated, both for fishing vessels and buyers, as Port St. Mary.

That a remedy for the evils now experienced could be had by the erection of a breakwater on the low point on the south side of the bay, a work which had the approval of the late Lord Auckland, when First Lord of the Admiralty, who visited the locality, and has recently been recommended by James Walker, Esquire, Engineer, who inspected the place at the request of the Commissioners of Harbours.

Such breakwater could be erected at a comparatively small expense, on account of the length and elevation of the Point, and of the material being on the ground, such expense being two-thirds less than at any other port in the Island, the cost of cutting the stone alongside not being more than from one shilling and nine pence to two shillings per ton.

According to Mr. Walker's estimate, a breakwater of 250 yards in length could be erected at a cost of 3,500*l.*

A breakwater on the said Point would afford shelter from all winds, and would enclose a large space of ground available for the accommodation of all vessels engaged in the fishing and coasting trade, and also a place of refuge during storm for other vessels at all times of the tide, and it would likewise admit of vessels being alongside at low-water, an advantage of considerable importance, inasmuch as when the boats put into the present harbour during a passing storm (which they must at present do from the unprotected state of the bay), it frequently happens that after they have grounded through the fall of the tide, the weather moderates, and the boats being unable to go to sea, a night's fishing is lost.

In 1857, fourteen nights' fishing were in this way lost; whereas had there been a breakwater on the Point, there would have been no necessity to have put into harbour, the bay affording sufficient shelter. As evidence of the necessity of a breakwater, it may be mentioned that in 1856 the sum of 600*l.* was subscribed by the fishermen and parties connected with the fishing trade towards the erection of such breakwater, such sum to be paid in case the work were commenced within two years. During the last twenty years frequent casualties to vessels with loss of life have occurred at Port St. Mary and the neighbouring coast, namely, from Sangness Point to the Calf of Man, which casualties might, in all probability, have been avoided, had protection been afforded in Port St. Mary Bay. Amongst such casualties, there being 3 ships, 9 brigs, 6 schooners, and 16 smacks; and on one occasion at night, during a gale from the south-west, fourteen luggers were lost, making a total loss of life of thirty-seven men, perished through collision caused by the heavy roll in the bay.

Besides the vessels engaged in the herring fishery, there are from eighteen to twenty fishing luggers engaged in the cod fishery resorting to Port St. Mary, the produce of fish taken by them amounting annually to about 4,000*l.*

That your Memorialists have reason to apprehend that, in case certain contemplated improvements be made at the other harbours of the Island, the supply of stones requisite for such improvements will be taken from the said quarry; and, if such should be the case, in all probability the present habour will be rendered useless, and the bay more unsafe than even at present, and, besides the natural protection of the village, will be entirely removed; but these injuries would, in a great measure, be avoided by the erection of the breakwater aforesaid.

Under these circumstances, your Memorialists trust that you may be pleased to consider the importance of Port St. Mary, both as a place of trade in connexion with the herring fishery, and as a place of refuge for fishing and other vessels, as warranting your recommendation for a portion of money to be expended by the Government in refuge and other harbours; and that it may be recommended, in any case, that no further quarrying may take place at Port St. Mary aforesaid, unless a breakwater be first erected on the Point.

Your Memorialists also trust that this memorial may accompany the proceedings of the Royal Commissioners. And they will pray, &c.

(51 Signatures follow.)

26th November, 1858.

I certify that the foregoing Memorialists, most of whom I am personally acquainted with, are to the best of my belief proprietors of vessels and houses belonging to Port St. Mary; and that I consider the statements in their memorial to be perfectly correct; and that it would be destruction to the Bay of Port St. Mary as a place of safety for vessels to anchor in, as also to the lower part of the village itself, to have stones taken from the quarry mentioned by the Memorialists without first erecting a sufficient pier or breakwater upon Port St. Mary Point.

EDWARD M. GAWNE,
One of Her Majesty's Justices of the Peace, acting in, and for the Isle of Man.

APPENDIX, No. 19.

MINUTES of EVIDENCE to be given with reference to the HARBOUR of PORT ERIN, in the Isle of Man, September 1858.

EDWARD FARGHER, master of the fishing lugger *Britannia*, who has followed the fishing 40 years, can speak of the necessity for a deep-water shelter at Port Erin on the west side of the island, which place is the centre of the herring fishery, and that this is the opinion of the whole fleet.

That the fish are in the best condition and realize better prices when taken off this bay.

That for want of shelter for the fishing vessels here a considerable part of the season is lost.

That during three weeks lately his nets were only shot twice, but if there had been a shelter in Port Erin that he could have left at any time of tide, his nets would have been shot almost every night, and the whole of the fleet were in the same circumstances. This being the prime of the season, the loss sustained by his vessel alone may be calculated at 10*l.* a night, which is a low average some times a night's take of one boat being worth from 60*l.* to 90*l.*

There are generally the heaviest takes of fish in stormy weather, when they cannot now get to the fishing ground.

The fishermen generally consider that if they had a deep, water harbour at Port Erin, which they could leave at all times of the tide, that they could take double the quantity of herrings.

That there are only four hours in the day in which the vessels can leave Port St. Mary to get to the fishing ground in proper time.

That witness can describe the difficulty of getting to the fishing ground from the other ports of the island.

Two thirds of the fish taken on the coast have to be taken round the Calf of Man to Port St. Mary, for the want of a harbour at Port Erin.

There are great numbers of English, Irish, Scotch, and Welsh vessels annually engaged in the Manx fishery and wanting shelter. There is a large fleet fishing off Port Erin every season, 700 vessels having been employed in the fishing this year.

The pier or breakwater required for the fishing fleet would also be available for coasting vessels.

This is the best anchorage ground in the island. Witness never knew nor heard of an anchor dragging in it, the bed of the bay being composed of sand and tough clay, and no rocks in it. The place is also well supplied with good water.

Witness lives on the mountain side near the Calf of Man, and has seen upwards of 60 trading vessels pass the Calf in a day, and owing to the dangers of the coast there are many trading and fishing vessels wrecked there, often attended with great loss of life. There are vessels wrecked there every year, and consequently the fishermen always dread having to pass the Calf of Man to and from the fishing ground.

That in 1848, when part of the fishing fleet were anchored in Port St. Mary Bay, a strong gale came on from the south-east. Many of the vessels dragged their anchors. Witness's boat and four others were broken to pieces on the rocks, and one man drowned; and on that occasion part of the fleet which were in Port Erin Bay were in perfect safety.

That the fishermen are willing out of their hard earnings to repay Government such portion of the outlay for a pier at Port Erin as may be determined upon, and witness is authorized to say so on behalf of the whole of the fishermen.

JOHN WATTERSON, master of the fishing lugger *Jenny*, who has followed the fishing 54 years, can confirm the evidence of Edward Fargher.

Witness can also state,—That on one occasion a fishing vessel called the *Filly* was swamped in a heavy sea when passing through the Calf Sound along with witness's vessel, and all her crew were drowned.

On another occasion, when part of the fleet were lying in Port Erin Bay, the wind went round to the west, and most of the vessels had to slip their anchors for fear of being swamped, and run them ashore; one of the herring buyers, with a large quantity of herrings on board, was driven on the rocks, and with her cargo became a total wreck.

Witness recollects another occasion when four herring buyers were endeavouring to put to sea with a west wind; two of them were driven on the rock from which it is proposed to run the pier, and smashed to pieces, and the other two were wrecked on the beach. If there had been a pier at Port Erin the whole of these accidents, as well as many other shipwrecks which have occurred on the coast, would have been prevented.

JOHN WATTERSON, master of the fishing lugger *William Milner*, who has followed the fishing 24 years, can confirm the evidence of the two former witnesses, as far as has occurred in his time.

Witness can also state that during last season, when his vessel had taken 85 mease of herrings, a lugger called the *St. Patrick*, having 120 mease of herrings on board, was swamped when going round to Port St. Mary, and the poor fishermen who owned the vessel and nets lost all they had in the world.

Witness has often seen many trading vessels passing Port Erin in great danger, taking shelter in the bay. Last winter, seven vessels ran into the bay for shelter on the same day, unprotected as it is, and remained for several days. There are 20 miles of the most dangerous unprotected coast between Peel and Port St Mary.

Witness has experienced great loss from being unable to put to sea, and often known, after the fleet being neaped in a dry harbour, favourable weather come on, when the sea was alive with fish, and many of the vessels might have been loaded if they could have got out.

APPENDIX, No. 20.

EVIDENCE respecting the FISHERMEN'S HARBOUR at PORT ERIN, in the ISLE of MAN, 14th October 1858.

WILLIAM QUALTROUGH, of the parish of Rushen, in the Isle of Man, who has since the year 1809 collected the manorial rents payable in such parish to his Grace the Duke of Atholl, and to the Crown; and has been in the habit of following the fishing for the last 63 years, having first gone to the herring fishing in 1795, saith:—

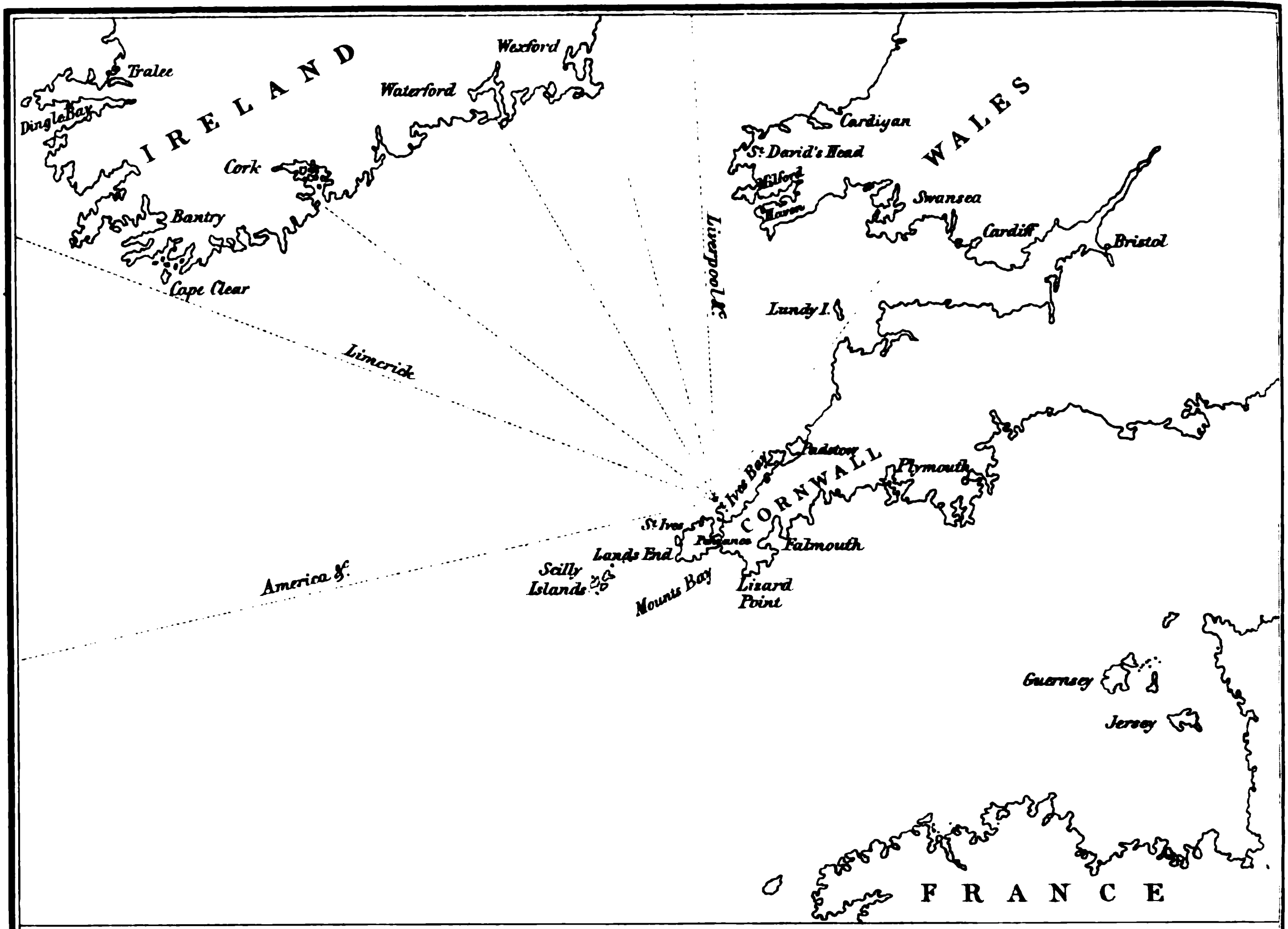
I have always lived in the neighbourhood of Port Erin, and am well acquainted with the coasts of the island frequented by the herring fleet, especially around the Calf of Man. From my earliest experience it has always been the wish of the fishermen to have a harbour at Port Erin. I remember also my father and several old fishermen naming to me that a petition had been presented to the Duke of Atholl, before my time, for a shelter at such place for the fleet, and which I consider would be of the greatest possible advantage, for the following reasons:—

Port Erin is situate in the centre of the best fishing ground.

The entrance to the bay is very accessible, it being deep water, having no out lying rocks.

The offing from the bay for a considerable distance is protected, on the south and south-west by the Calf of Man, and on the north and north-east by the highlands of the island from Bradda Head to Peel, the bay being completely

TO ACCOMPANY CAPTAIN VETCH'S REPORT HARBOURS OF REFUGE COMMISSION APPENDIX Nº 21.



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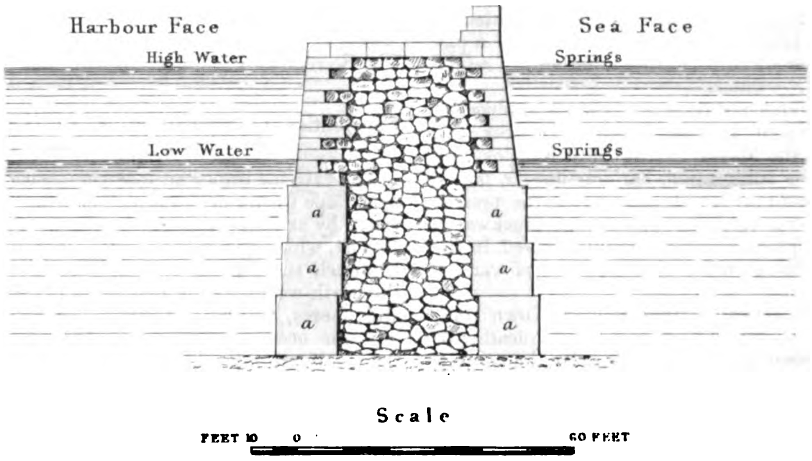

a. a. a. Blocks of granite masonry 8 to 12 Feet Cube each to be built with hydraulic lime on the shore & then floated out & deposited in their places & large masses are chosen to render the work cyclopean & immovable by the action of the sea and independent of very nice fittings, and also to abbreviate the amount of workmanship below Low Water.

Malby & Sons, Lith.

land-locked on the eastward; the bold heads at the mouth of the bay affording excellent landmarks on the darkest night.

The anchorage in the bay and outside is excellent. I have never known an anchor drag in it.

The entire Manx fleet, and all the English, Irish, Scotch, and Welsh fishing vessels frequenting the coasts of the island, assemble off Port Erin for the greater part of the fishing season, and if there were a good shelter there they would be spared all the dangers and hardships of having to take their vessels round the Calf of Man to Port St. Mary, or to Peel; and one half of the labour and hardships which the fishermen undergo at present would be avoided.

I am also of opinion that the quantity of fish taken by the fleet would be very considerably increased, and the numbers of men and vessels engaged in the fishing would also be increased, affording a useful reserve for the Royal Navy. I myself, having served four years, from 1798 to 1802, on board the ship of war "Glory," of 98 guns, upwards of 40 of us having joined the Royal Navy in one night.

I have known of many lives and vessels lost on this coast which would have been prevented had there been a pier at Port Erin.

It is my opinion that if the pier recommended by Captain Vetch were made at Port Erin it would form the best harbour of refuge that could be made in the Isle of Man, not only for the fishing fleet, but for coasters as well.

I attended Captain Vetch when he visited Port Erin, in September 1857; and, as one of the committee for obtaining the erection of a pier at such place, I have attended all the meetings of the fishermen held respecting it, at which they unanimously agreed to pay 2*l.* a boat for the season, until the pier should be paid for; and I consider it would be greatly for their benefit to do so.

APPENDIX, No. 21.

Report on St. Ives Bay, Cornwall, by Capt. James Vetch, R.E., F.R.S.

Sir, 31st July 1847.

In obedience to the instructions conveyed to me by the Hydrographer to the Admiralty, I have now to report that I took advantage of an occasion of being in the West of Cornwall, to visit the bay and harbour of St. Ives, for the purpose of examining and reporting on the merits of a petition from the merchants, shipowners, shipmasters, and inhabitants of the borough, and other parties interested in the trade of the port, praying for the construction of a pier or breakwater, and thereby to constitute a harbour of refuge in the bay of St. Ives.

Having given previous notice of the time and object of my visit, I repaired to St. Ives on the 20th October last, and in company with the Mayor, Mr. Richard Kernick, and several members of the corporation, harbour-master, pilots, &c., I proceeded at time of low water to view the present harbour, and the several sites for a proposed breakwater, and to examine the adjoining shores; and I received, in the course of inspection, the opinions and evidence of various shipmasters, pilots, &c.

After visiting the localities, I attended at the Town Hall, to take further evidence, and to hear any communication or suggestion which individuals had to offer on the subject. Lastly, I proceeded with the Mayor and other parties to inspect the quarries of granite, and greenstone rocks, from which the stones might be most easily procured for the construction of a breakwater.

Since my visit to St. Ives, I have been in frequent correspondence with Mr. Samuel Hocking, an intelligent gentleman of that town, and have received from him and others valuable information, and from Mr. Francis Adams a manuscript chart of the bay, being the best I have as yet had an opportunity of seeing.

I have also taken an opportunity of conferring with Capt. Sheringham, R.N., who has had various opportunities of visiting the bay of St. Ives, and I have received much benefit from the information and opinions of that talented officer.

Previous to entering upon the detailed account of the conditions and circumstances of St. Ives Bay, I shall briefly state the conclusions I have been able to arrive at on the subject of the memorial of the petitioners, and the queries put to me by the hydrographer.

1. As respects the petition or memorial signed by the Mayor and about 250 persons, interested in the commerce of the port. I am of opinion that there is a great want of and necessity for a harbour of refuge for our mercantile navy on the north shore of the western extremity of the Cornish promontory, and that the position of St. Ives Bay, combined with other natural advantages, renders it the most eligible of any on that coast for the purpose.

2. In answer to the question, From what part would it be most advisable to throw out a breakwater? I deem the most eligible site to be a point about 300 yards north-east of the head of the present pier; the line of breakwater to be directed about south-east by compass.

3. In answer to the question, What length of work would afford shelter? I am of opinion that a breakwater 2,000 feet long would afford the necessary shelter. I have, however, adopted the principle and the direction of line of breakwater, that if carried only to a distance of 1,000 feet it would prove highly useful; and then should the necessities of trade, and the benefit of the breakwater, show a sufficient inducement, the work may be carried out to the full extent of 2,000 feet.

4. In answer to the question, What would be the cost in round numbers of such an undertaking? I estimate that, notwithstanding the work will run into seven fathoms water at ebb of tide, the cost need only amount to about 100*l.* per lineal foot, because the stones can be brought to the quay on a tramway, and blocks of granite for face-work can be prepared for setting and be delivered at 5*s.* 9*d.* per ton, and greenstone for the interior or backing can be delivered at 2*s.* per ton. The cost therefore of a breakwater 2,000 feet long would be about 200,000*l.*, which may be expended at the rate of about 20,000*l.* per annum, and in five years a useful amount of protection would be obtained.

5. In answer to the question, How far the advantages to general navigation, or its particular benefits to the neighbourhood, would justify the cost?

It appears that between the Land's End and Trevose Head there have been 131 ships and 12 sein-boats lost in 24 years, equal to 5½ vessels per annum, and in the last nine years at the rate of nine ships per annum, all or most of which would have been saved, had there been a safe port to run to; there can therefore be no question as to the vast use of the proposed breakwater to general navigation and commerce.

In a local point of view, the capital invested in the pilchard fisheries of St. Ives exceeds 150,000*l.*, and employs 400 boats, and 735 men, while 100 men are employed in other fisheries; yet so exposed is the bay in northerly winds, that steamboats bound for Hayle, at the head of the bay, have sometimes been obliged to round the Land's End, and take shelter in Mount's Bay; whereas with a pier or breakwater in St. Ives Bay, the depth of water and clean bottom would have presented a fitter as well as more convenient place of refuge.

I have, &c.,

The Secretary, Admiralty. James Vetch.

Capabilities and Advantages of St. Ives Bay as the Site of a Port of Refuge for Merchant Ships.

The extreme importance of the position of St. Ives Bay, near Cape Cornwall, for a port of refuge, will be best appreciated by an inspection of the chart No. 2, annexed to this Report, which shows the south coast of Ireland, the Irish Channel, the Bristol Channel, the English Channel, and the north-west coast of France, in the midst of which seas and shores, the great Cornish promontory stretches out into the ocean, and intercepts the course of traffic, when the winds are adverse for weathering that western cape of England.

Of all the headlands of the British Islands, the Cornish promontory is the most projecting, and on the largest scale, and is so salient a point as to cause to many vessels navigating the neighbouring seas the necessity of a complete change of course, and thereby rendering it most desirable to have a safe port in the vicinity of the headland, where they may wait for a wind, and if such a one were provided in St. Ives Bay, it would prove to the traffic and commerce near the Land's End what the anchorage of the Downs presents to the traffic near the North Foreland.

St. Ives Bay is situated 12 miles east of Cape Cornwall, and being an extensive, deep, sandy bay, clear of rocks, forms a rare but valuable feature on the Cornish coast.

The width of the bay is 3 nautical miles.

The depth of the bay to low-water mark, 1½ miles.

The depth of the bay to high-water mark, 2 miles.

Depth of water in the middle of the bay, 10 fathoms, with a great expanse of deep water, shoaling gradually and with a remarkably clean and smooth bottom, said to be composed of blue clay below, with a thin stratum of sand over it, and to prove good holding-ground.

The bay is sheltered on three sides, but is open to the north by compass, and to complete the many good qualities which nature has bestowed on the locality, it seems only necessary that art should furnish protection against northerly winds, as at present vessels not only dare not lie in the bay exposed to gales from that quarter, but so frequently does the wind chop round suddenly from west to north, as to prevent vessels resorting to the anchorage at any time.

In the immediate vicinity of the town of St. Ives, there exist extensive quarries of fine granite, suitable for the facing of quays and piers, and also abundance of greenstone fit for the interior work, which may be procured at a very small cost, so that whatever works are required to be performed for the objects in view, may be executed at St. Ives with more economy than at almost any other locality in the British Islands.

The above circumstances serve to show what are the many advantages and capabilities which exist in St. Ives Bay, for constructing a harbour of refuge there, and it now remains to point out the alleged necessity for undertaking such a work.

St. Ives Bay (as has already been stated) is situated in the immediate vicinity of the great turning point of an extensive navigation, where it becomes no less necessary than desirable, for vessels to wait for fair winds, and more particularly on a coast so dangerous and rocky, and so destitute of any place of refuge as the north coast of Cornwall, where vessels passing St. Ives Bay, and bound up the Bristol Channel, with an on-shore wind, have to run a gauntlet of dangers, the last and not least formidable being those of St. Bude's Bay, and Barnstaple Bay.

The best criterion, and the most convincing argument of the importance of such a place of refuge, will probably consist in the frequency of shipwrecks occurring in the vicinity; I have therefore furnished in the Appendix a list of vessels which have been wrecked between Cape Cornwall and Trevose Head in 24 years, extending from 1823 to 1846, inclusive, and occurring over an extent of coast of 36 miles, viz.:—for 12 miles south-west of St. Ives, and for 24 miles north-east of it.

It will be seen by the list that no less than 131 vessels, besides boats, have been wrecked within the above limits, giving an average of 5½ wrecks per annum in the 24 years, and of 9 wrecks per annum in the last 9 years, which no doubt results from the greatly increasing traffic during the latter period.

The tonnage of 35 of the above-mentioned vessels is given, presenting an average of 175 tons to each, and if this average be applied to the whole number, we have, for 131 wrecks in 24 years, a total of 22,925 tons, and an annual average of 955 tons; for 82 wrecks in the last 9 years, a total of 14,350 tons, and an annual average of 1,594 tons; so that considering the constant increase which the traffic annually receives, the existing state of the casualties may be fairly assumed to be nearly at the rate of 1,600 tons per annum.

The position of the locality in the line of general traffic, would naturally lead to the inference that the vessels wrecked were of a very mixed description; accordingly we find that, out of 131 vessels, 29 are foreign; some belonging to Ireland and Scotland, and some to Guernsey and Jersey; and we further find that the burthen of the vessels wrecked varies from 50 to 500 tons.

The list of the wrecks furnishes very little information as to the value of the cargoes, five out of the whole number being only given; one of these of 300 tons burthen is valued at 45,000*l.*; the other three cargoes at 8,000*l.*, 1,200*l.*, 600*l.*, and 400*l.*, respectively.

It is very difficult, in the absence of more precise information, to arrive at a proximate valuation of the ship and cargo per ton; considering, however, that a number of the vessels on the list are foreign or foreign bound, I am of opinion that the average value of the cargo may be taken at not less than 12*l.* per ton, and that the vessel itself may be averaged at the same amount, making a total of 24*l.* per ton for vessel and cargo: supposing, again, the value of the vessels and cargoes recovered to be equal to that of one-half of the whole lost or damaged, there will result an absolute loss equal to 12*l.* per ton, or 19,200*l.* as the annual loss, as computed, on the last 9 years.

In the list of shipwrecks, the number of crews recorded to have been drowned, amounts to 24, exclusive of 9 passengers, and about 20 individuals lost, when the remainder were saved; from which the total number of lives lost by shipwrecks may be estimated about 200 in the course of 24 years.

One great peculiarity shown by the list of wrecks, is the great number occurring in a single storm. Thus, on the 30th October 1823, wind north-north-east, the wrecks of 14 vessels and 12 boats are recorded.

Of the above number, 8 vessels and 3 crews, and all the boats were lost in St. Ives Bay, and nearly within the very locality of the shelter proposed to be given by the breakwater; the other 6 vessels were lost 4 miles to the eastward, at Zennor.

In the storm of the 4th and 5th of February 1840, 9 wrecks are recorded. In the storm of the 14th December 1841, 7 wrecks are recorded.

It may indeed be urged that had a harbour of refuge existed in St. Ives Bay, all the vessels recorded on the list would not have been saved thereby: admitting the truth of this inference, it must not be forgotten that the casualties recorded apply only to 36 miles of coast, whereas a harbour of refuge at St. Ives Bay might have been the means of saving many a vessel bound beyond these limits, even up to St. Bude's and Barnstaple Bays, on the Cornish and Devonshire coast, and to Carmarthen Bay, on the Welsh Coast, as it will be seen by the statement in the Appendix of Captain Stevens (the harbour-master) "that a St. Ives pilot cruising off the bay, spoke a ship of about 700 tons (blowing a gale from north-north-west); the master would most willingly have come into a harbour at St. Ives had there been one available, but, unfortunately having no place of refuge, was driven ashore in Carmarthen Bay, and all on board, to the number of 22, perished."

The pilots of St. Ives are a hardy, intelligent race, and cruise to the westward as far as the Scilly Islands, and had they but a safe port to run to, there can be no question of the number of vessels that would be annually saved by them.

As regards the necessity of a harbour of refuge at St. Ives Bay in a national point of view, the question of shipwrecks will, it is presumed, afford a conclusive answer.

In a local point of view, the fisheries, and the importance of fostering that branch of national industry, deserves the first attention, and it appears from the answers to the question by the Tidal Harbours' Commission that there is a capital of 150,000*l.* invested in the fisheries of St. Ives, and that there are 400 boats and 735 men employed in the pilchard and mackerel fisheries, and 100 men employed in other fisheries, and that there are 1,381 registered seamen belonging to the port.

On the 27th October 1846, shortly after my visit to St. Ives, there was a capture of pilchards in the bay, estimated at 25,000 hogsheads, of which full 17,000 hogsheads were secured and tucked, and the same being valued at 15*s.* per hogshead, would produce a return of 12,750*l.* on that occasion; and allowing 2,820 fish to a hogshead, the total number then secured may be estimated at 47,940,000 fish.

As a fishing station and nursery for fishermen, the requirements of St. Ives Bay are fully entitled to public consideration.

The Custom-house port of St. Ives includes,—

1st, St. Ives Harbour.

2nd, The Hayle Creek, or Estuary at the head of St. Ives Bay.

3rd, Portreath.

4th, St. Agnes.

Of these the principal harbour is Hayle, where it appears that the arrivals per annum amount to 763 vessels.

At St. Ives to - - - - 144

Total of arrivals in the bay - 907 vessels.

The Hayle Creek or Estuary is a site of considerable commerce, owing principally to two splendid establishments there for founding iron, and for the manufacture of steam-engines, &c., and there can be little doubt that were a safe anchorage established in St. Ives Bay, that event would prove most useful to the foreign trade of Hayle, which in itself is merely a tidal harbour, dry at the time of low water of spring tides, and with a bar.

2ndly, There is a regular communication between Bristol and Hayle by steam-packets, but owing to a want of shelter in St. Ives Bay, it has sometimes happened with a north-easterly wind that the steamers have not ventured to run into the Hayle Creek, or to bring up in the bay, but have preferred to round the Land's End, and take shelter at Penzance.

With regard to the necessity of a harbour of refuge at St. Ives Bay, it may be stated, in conclusion, that besides the memorial from the inhabitants, there are 13 petitions from other places, urging the measure upon the attention of the Admiralty.

In the Appendix is inserted a portion of the Report of Mr. Smeaton, C.E., dated 1766, which will also serve to show the importance which that great engineer attached to the locality and to the creation of a safe shelter there.

The next question which I have to submit relates to the nature and cost of the works proposed to effect the objects which have been advocated.

The only artificial harbour in St. Ives Bay at present is that completed by Mr. Smeaton about the year 1770, and which consists of a pier 360 feet long enclosing a small bay, dry at low water of ordinary spring tides, but completely sheltered against every wind, and where vessels may take the ground in safety.

Previous to the construction of Mr. Smeaton's harbour, there only existed a very insignificant pier for the accommodation of fishing boats and small coasters, which was removed, but the site of the same is shown by a dotted line on the chart No. 1.

Although the work constructed by Mr. Smeaton only projected to the low-water mark of spring tides, it formed a great improvement over the previously existing state of the harbour, as it afforded complete protection against the north-easterly winds, to which this inner bay or haven had been exposed, and he calculated that there would be seldom less than 20 feet of water at the pier head at the time of flood, and never less than 18 feet.

The work of Mr. Smeaton proved of great value at the time it was built, and constituted an improvement in that day, over the old pier, equal in amount to what a deep-water pier or breakwater would now constitute over his own work, and which the necessities of increased traffic, and vessels of larger burden, no less demand at the present day.

There have been three several designs for forming a breakwater at St. Ives, all proceeding from the Merran Rock (lying to the north of the town), and extending for about 2,000 feet in a south-easterly direction.

As to the mode of construction, I should carefully avoid in the form of the cross section all long slopes, and on the contrary build up the face-work with a batter of not more than 1 in 9.

From the shore to about 6 feet below low-water mark, I should commence creating a foundation or hard, by depositing small broken stones, and allowing the mass to take its bearing, and upon the same to build up the face with blocks of granite, and to fill the interior with rubble work of greenstone.

According to the estimate of Mr. Kernick, the late mayor, the granite facing would be delivered from the tramways at 5*s.* 9*d.* per ton (of 13½ cube feet), and the rubble hearting of greenstone would be supplied at 2*s.* per ton.

In proceeding into deep water, I still propose to obtain a foundation by a deposit of small broken stones, but from thence up to within 6 feet of low-water mark, I propose to construct the face-work of blocks of granite masonry of from 6 to 12 feet cube each, the stones to be cemented and bolted together on the shore, and then floated out and deposited in their places, and I have chosen such large masses to render the work cyclopean, and immovable by the action of the sea, and independent of very nice fittings, and also to abbreviate the amount of workmanship below low-water mark.

Nothing but an absolute tender can render an estimate entirely to be depended upon.

I have, however, in various ways been led to believe that 100*l.* per lineal foot will be more than sufficient for the work.

The cross section in 7 fathoms water, of the substance shown on the plan (which is amply stout) is as follows, and will at least serve as a guide to the cost:—

	£	*s.*	*d.*
1,336½ cubic feet of granite facing, or 99 tons at 6*s.*, delivered - -	29	14	0
1,876½ cubic feet of rubble hearting, or 139 tons at 2*s.*, delivered - -	13	18	0
Stones ready to set - - - -	43	12	0
Mortar, setting, &c. - - -	43	12	0
Cost per lineal foot - -	87	4	0

2,000 lineal feet of pier, at 87*l.* 4*s.*=174,400*l.*

The section given is stouter than what is absolutely required, and the quantities computed are those belonging to a cross section at the greatest depth of water, and thereby affording a considerable margin; in addition to which there remains on the whole a sum of 26,000*l.* within the estimate of 100*l.* per lineal foot.

I am of opinion that the work should, in point of economy, proceed slowly and constantly, at the expenditure of not more than 25,000*l.* per annum, since if a greater speed were aimed at, the price of materials would be much augmented, and the workmanship would probably be less correct.

If the undertaking should be approved of, the first item of expenditure should be the cost of making a detailed and correct chart of the bay, which indeed is essential to any correct design of what is proposed to be done.

The line of breakwater, as laid down on the plan, must therefore be considered as but an approximation to that which a more correct plan may show to be most in accordance with the principles laid down.

All parties examined, and opinions recorded, agree that little danger is to be apprehended from silt or deposit; nevertheless I would recommend running out the pier *g g* in the line of the Carrack Rocks, which I conceive would have the effect of arresting any material travelling along the shore, and so getting lodged within the proposed harbour.

The area of the harbour of refuge thus proposed contains nearly 100 acres within the line of low-water mark, and an area of 75 acres of two fathoms and upwards (at the time of low water).

JAMES VETCH,
London, 31st July 1847. Captain, R.E.

Appendix.

(A.)—Copy of Memorial from the Merchants, Shipowners, &c. of St. Ives to the Lords of the Admiralty.
(B.)—A List of Shipwrecks between the Land's End and Trevose Head, from 1823 to 1846.
(C.)—Extract from Smeaton's Report on St. Ives, 1766.
(D.)—Extracts from Letters, &c. chiefly from Samuel Hocking, Esq., St. Ives.

(A.)—COPY of MEMORIAL from the Merchants, Shipowners, &c. of St. Ives to the Lords of the Admiralty.

To the Right Honourable the Lords of the Admiralty of Great Britain and Ireland.

The Memorial of the undersigned merchants, shipowners, shipmasters, and other inhabitants of the borough of St. Ives, in the county of Cornwall, and also of other merchants, shipowners, shipmasters, and mariners, resident at several ports of the United Kingdom,—

Showeth,

That your memorialists are in the constant habit of trading as merchants and mariners to and from the ports on either side of the north of St. George's Channel, both in coasting and foreign commerce.

That there is at present no harbour on the north-west coast of England between the Land's End and Milford to which a vessel might run with a good chance of saving the lives and property in the very severe and destructive storms which frequently visit that coast; and that your memorialists have, in the navigation of the said channel, often suffered great losses, and witnessed the losses of others, both in life and property, chiefly from the want of such a harbour. That your memorialists consider that a harbour of refuge is imperatively called for to provide for the safety of life and property so exposed, and that the best situation in the whole line of coast for constructing it is in the bay of St. Ives, in the county of Cornwall, where, by the erection of a breakwater which will require but a comparatively small sum of money to complete it, a floating harbour capable of giving perfect shelter from all winds to upwards of 200 vessels, of from 100 to 1,000 tons burthen or more, might be made.

That St. Ives is already a considerable seaport, and its improvement would not only be the means of providing a harbour of refuge in a locality where it is very greatly needed, but also of expediting and increasing the intercourse and traffic between the western ports of Great Britain and Ireland.

Your memorialists, therefore, humbly pray your Honourable Board to institute a prompt inquiry into the matter, and to direct such steps to be taken therein as to your wisdom may seem most likely to conduce to the public welfare.

And your memorialists will ever pray, &c.

Signed by RICHARD KERNICK, Mayor,
and 250 Inhabitants, &c.

No date to this petition, but
supposed to be in August 1846.

(B.)—LIST of SHIPWRECKS and CASUALTIES which have occurred between the Land's End and Trevose Head, from 1823 to 1846.

Date.	Vessels' Names.	Tonnage.	Nation or Places belonging to.	Where Lost or Stranded.	Cargoes.	Value of Cargoes.	From	To	Winds.	Remarks.
April, 1823	La Melanie	71	France	-	Dry hides and Brasil wood.	-	Lisbon	Havre-de-Grace	-	In a sinking state, compelled to run ashore near St. Ives at low water.
Oct. 23, „	A brig	-	„	Lost on the stones in St. Ives Bay.	Iron	-	-	-	-	Two men drowned.
„ 30, „	Norwegian barque	-	-	Lost on the Peden Olver Rocks in St. Ives Bay.	Timber	-	-	-	N.N.E.	Crew saved.
	Sloop	-	England	Lost on Porthminster Beach	Coals	-	-	-	„	„ „
	Fame	-	„	Under the Church-yard in St. Ives Pier.	Slates	-	-	-	„	„ „
	Betsey	-	„	Stranded near Porthminster, St. Ives Bay.	General	-	Bristol	-	„	One man drowned.
	Margaret	-	„	Lost on Porthminster Beach	Coals	-	Wales	-	„	Crew saved.
	Alfred	-	„	„ „ Peden Olver Rocks	Flour	-	Waterford	-	„	One man drowned.
	Samuel	-	„	„ „ Portminster Beach	Coals	-	Wales	-	„	Crew saved.
	Providence	-	„	„ near Zennor	Copper ore	-	Portreath	Wales	„	Crew drowned.
	John Adams	-	„	„ „ „	„	-	„	„	„	„ „
	George and Ann	-	„	Foundered near St. Ives Head	„	-	„	„	„	„ „
	Ratford	-	„	„ „ Zennor	„	-	„	„	„	„ „
	Plover	-	„	„ „ „	„	-	„	„	„	„ „
	Thomas	-	„	„ „ „	Ballast	-	-	-	„	„ „
	Thomas Savory	-	„	„ „ „	„	-	-	-	„	„ „
	BOATS AND SEINES.									
	Jane Seine	-	-	Lost at Carrack Gladdin in St. Ives Bay.	—	—	—	—	—	
	Trident „	-	-	Lost near St. Ives Pier.	—	—	—	—	—	
	Active „	-	-	„ Porthminster.	—	—	—	—	—	
	Harmony „	-	-	„ „	—	—	—	—	—	
	Cossack Boat	-	-	Lost in St. Ives Pier.	—	—	—	—	—	
	Harmony „	-	-	„ „	—	—	—	—	—	
	Prudent „	-	-	„ „	—	—	—	—	—	
	Fortune „	-	-	„ „	-	-	-	-	-	A few days after the gale of the 30th October eleven bowsprits were picked up between St. Ives Head and the Land's End.
	Warren „	-	-	„ „	—	—	—	—	—	
	Friends „	-	-	„ „	—	—	—	—	—	
	Devonshire „	-	-	„ „	—	—	—	—	—	
	Triumph „	-	-	„ „	—	—	—	—	—	
1824.	Union	-	England	Lost on Porthminster Beach, St. Ives Bay.	Oil cake	-	Dublin	-	N. by E.	Crew saved.
April 12, 1826	L'Océan	-	France	Lost on Hayle Bar	Logwood	-	Campeachy	-	N.W.	„ „
	Lovely Ellen	-	England	„ eastern part of St. Ives Bay.	-	-	-	-	-	„ „

(B.)—List of Shipwrecks and Casualties which have occurred between the Land's End and Trevose Head—*continued.*

Date.	Vessels' Names.	Tonnage.	Nation or Places belonging to.	Where Lost or Stranded.	Cargoes.	Value of Cargoes.	From	To	Winds.	Remarks.
April 22, 1827	L'Argus	-	France	-	Beans and merchandise.	-	Nantes	Bristol	-	Put in in great distress, and farther damaged in St. Ives Pier.
	Emily	-	England	-	Barilla and Orchilla weed.	-	W. Indies	-	-	Brought into St. Ives in great distress; part of the cargo thrown overboard.
Jan. 28, 1828	La Ville	-	France	-	Pig iron	-	Cardiff	Dunkirk	-	Cut her cable, and run on St. Ives Beach in a sinking state.
March „	John	-	England	Foundered two miles off St. Ives Head.	-	-	-	-	N.N.W.	Crew saved.
Jan. 4, 1829	———	-	„	Lost on the stones in St. Ives Bay.	Coals	-	Wales	-	„	„ drowned.
	John and Maid	-	„	Lost near Trevose Head	„	-	„	-	„	„ saved.
June 28, „	Bellona	-	„	Eastern part of St. Ives Bay	Slates	-	-	-	N.	„ drowned.
July „	Sarah	153	„	Stranded at the entrance of St. Ives Pier.	Coals	-	Milford	London	-	In a sinking state, compelled to run on the beach at ebb tide.
1830.	Brothers	-	„	„ „ „	Hoop iron	-	Liverpool	Seville	-	Cargo damaged.
	Liver	-	„	-	Ballast	-	-	-	N.N.E.	Run on St. Ives Beach during a heavy gale, to save life and vessel.
Dec. 30, „	Unity	-	„	Dismasted near Godrevy, in St. Ives Bay.	Coals	-	Wales	-	N. by E.	Crew picked off whilst at anchor.
	Active	-	„	Lost near Porth Towan	Tin plate in boxes	-	Kidwelly	London	N.N.W.	Crew saved, and part of cargo in a damaged state.
1832.	Draper	-	„	-	General	-	Liverpool	Rotterdam	„	Brought in in great distress; part of cargo thrown overboard.
	Gipsey	-	„	Eastern part of St. Ives Bay	-	-	-	-	N.	Crew drowned.
Feb. 20, 1833	Peggy	-	„	Lost near St. Agnes	Coals	-	-	-	N.N.W.	One man drowned.
„ 21, „	Unido	-	Portugal	Totally dismasted and anchored off Porth Towan.	Ballast	-	Waterford	Lisbon	N.	Crew saved.
March 6, „	Good Statesman	-	England	Foundered off St. Ives Head	Copper ore	-	-	-	„	„ „
Nov. 29, „	Mary Ann	-	Scotland	Lost near Zennor	Timber	-	-	-	N.N.W.	„ drowned.
	Gipsey	-	England	On Peden Olver Rocks, near St. Ives Pier	Ballast	-	St. Ives	Plymouth	E.N.E.	„ saved.
	Rachael	-	Ireland	Damaged in St. Ives Pier	Oats	-	Youghal	London	-	Cargo rendered useless.
1834.	Union	-	England	Stranded near Portreath	Coal	-	Newport	Scilly	N.N.W.	Crew saved.
	Prosperous	-	„	„ „ „	„	-	ales	Newhaven	„	„ „
Dec. 7, 1835	Active	-	„	Near the Land's End	General	-	Rouen	-	-	„ „
„ 9, „	Le Hereaux	-	France	Foundered two miles from St. Ives Head.	Apples	-	Guernsey	Bristol	N.N.E.	„ „
Jan. 3, 1836	Fanny	-	England	Foundered off New Quay	Coals	-	-	-	-	„ drowned.
	L'Alfred Leonie	60	France	Stranded on St. Ives Beach	Ballast	-	Nantes	Cardiff	N.E.	„ saved.
Sept. „	L'Ostendais	100	„	Foundered four miles from St. Ives Head.	Salt, tin, & wool	-	Liverpool	Ostend	„	Saved in the boat, and landed at St. Ives.
	Sarah	-	England	Stranded on St. Ives Beach	Bricks	-	Bridgewater	Portreath	„	Vessel badly damaged; cargo discharged.
Dec. 25, „	Four Sisters	-	„	„ „ Pier	Coals	-	Wales	-	N.	Crew saved.
March, 1837	Name unknown	-	„	Lost near Trevose Head	Timber	-	-	-	-	„ drowned.

(B.)—List of Shipwrecks and Casualties which have occurred between the Land's End and Trevose Head—*continued.*

Date.	Vessels' Names.	Tonnage.	Nation or Places belonging to.	Where Lost or Stranded.	Cargoes.	Value of Cargoes.	From	To	Winds.	Remarks.
Feb. 8, 1838	Marie Celeste	-	France	Sunk in St. Ives Pier	Iron and tin plates	-	Bristol	Rouen	-	Compelled to run for the pier.
	Jean Baptiste	53	„	„ „	Iron	-	„	„	-	Crew saved.
April „	Neptune	250	England	Lost on Godrevy Point in St. Ives Bay.	General	-	Liverpool	Amsterdam	N.N.E.	Crew, 9 in number, drowned; this vessel was driven into the bay during the night.
	General Foy	300	France	-	Copper and sugar	8,000	Martinique	Havre	-	Two men drowned prior to the crew being picked off by an English vessel.
	John and Mary	400	England	-	Timber	1,200	America	Sunderland	-	Picked up; abandoned.
	Lamb	67	„	Struck on the Carrick Rocks in St. Ives Bay.	Culm	-	Wales	Plymouth	N.W. to W.	Brought to St. Ives in a sinking state.
June, „	Orotava	100	„	-	Iron	-	Glasgow	London	N.N.W.	„ „ „
	Calinick	-	„	-	Copper ore	-	Truro	Llanelly	„	Dismasted, with considerable damages; was run on the beach for the safety of the ship and cargo.
Oct. „	Josephine	220	France	-	Cotton, coffee, & other merchandize.	-	Port au Prince	Havre	N.W.	Warped into St. Ives Pier, in distress.
Dec. 24 „	Rival	122	England	Stranded on Portminster Beach in St. Ives Bay.	Salt	-	Bristol	Pool	N.N.E.	Crew saved.
Mar. 11, 1839	Annette	70	Belgium	-	Oil cakes	-	-	-	N.N.W.	Run on shore in St. Ives Pier, in a sinking state, and afterwards condemned and sold.
	Maria	90	„	Totally dismasted west of St. Ives Head.	Corn	-	-	Liverpool	„	Towed into St. Ives by the "Royal Adelaide" steamer; cargo much damaged.
„ 17, „	Victory	50	England	Sunk near Peden Olver Rocks in St. Ives Bay.	Iron castings	-	Bristol	Exeter	N.E.	First stranded at the back of the pier; crew saved.
	Priscilla	56	„	Struck on a sunken rock	Iron	-	Glasgow	Calais	-	Run on shore at Whitsand Bay, afterwards brought to St. Ives.
Nov. 9, „	Le Normand	180	France	-	Brandy and wine	-	Cette	Havre	S.S.W.	Brought into St. Ives with loss of rudder and other damages.
	Providence	-	England	Run on St. Ives Beach	Pipe-clay	-	Tinmouth	Bristol	-	In a sinking state.
	Industry	-	„	Foundered off New Quay	-	-	-	-	N.	Crew saved.
Feb. 4, 1840	James Stevens	-	„	„ near Zennor	Coals	-	Wales	-	N.N.W.	Crew drowned.
	William	-	-	„ off Portreath	„	-	-	-	„	Mate and two men drowned.
	Mary Ann	-	England	Lost on Peden Rocks in St. Ives Bay.	Ballast	-	-	-	N.E.	Crew saved.
	Little Queen	-	Ireland	Stranded at the back of St. Ives Pier.	Oats	-	Youghal	Portsmouth	N.N.W.	Cargo damaged.
	William Ranfield	-	England	Lost near Portreath	-	-	-	-	„	Captain and four men drowned.
	Nimble	-	„	Damaged after entering the pier.	Oats	-	Ireland	Penzance	„	Cargo damaged.
	Gannel	-	-	„ „ „	Coals	-	-	-	„	
„ 5, „	Thames	-	England	St. Agnes, at anchor	Salt	-	-	-	„	Abandoned: crew landed at Port Towan; vessel condemned and sold.
	Vigilant	-	Belgium	Dismasted off St. Ives Head	„	-	Liverpool	Ostend	„	Taken in tow by the "Water Nymph;" refused bringing the vessel into St. Ives; afterwards cast adrift and driven up the channel and taken to the Mumbles by the Pill Pilots, the "Water Nymph" being too sharp to lie on the ground.

(B.)—List of Shipwrecks and Casualties which have occurred between the Land's End and Trevose Head—*continued.*

Date.	Vessels' Names.	Tonnage.	Nation or Places belonging to.	Where Lost or Stranded.	Cargoes.	Value of Cargoes.	From	To	Winds.	Remarks.
Feb. 27, 1840	Robert - -	160	England - -	Lost on the stones in St. Ives Bay.	Slates - -	- -	Liverpool -	London - -	N.E.	Crew saved.
	Sisters - -	- -	- - - -	Foundered - - - -	- - - -	- -	- - -	- - -	N.N E.	Crew drowned; vessel's stern washed on shore.
Nov. 22 „	General - -	- -	- - - -	Lost under St. Agnes Cliff -	Coals - -	- -	Greenock -	Marseilles -	„	Crew drowned; this vessel was seen the evening before four miles off St. Ives Head, but the boats could not go to her owing to the heavy gale.
	Schooner, name unknown.	- -	- - - -	Foundered 3 miles off St. Ives Head.	- - - -	- -	- - -	- - -	- - -	„ „ „
	Emily - -	- -	- - - -	Anchored under "Moorah" -	Oats - -	- -	Youghal -	Portsmouth -	N.N.E.	Cut away the masts, and brought to St. Ives.
	Seduisant - -	300	France - -	„ in St. Ives Bay -	General - -	45,000	Havre - -	Martinique -	S.W.	Decks swept and badly damaged; one man washed overboard (cargo much injured, discharged and dried), vessel hauled into the pier with warps, after remaining all night in the bay in a heavy gale.
Mar. 22, 1841	Ambassador - -	450	- -	Driven back from 15" W. longitude.	Coals - -	- -	Sunderland -	Constantinople-	N.	Both mates washed overboard; decks swept and leaky.
	Hevelius - -	500	Prussia - -	- - - - -	Ballast - -	- -	Bordeaux -	Dantzic - -	- - -	So much damaged, condemned and sold.
	Triton - -	- -	- - -	Foundered off St. Ives Head -	„ - -	- -	- - -	- - -	N.N.W.	Crew saved.
	Lavinia - -	64	- - -	Stranded running into St. Ives Pier.	Railroad iron -	- -	Newport -	Goole - -	- - -	Broke her rudder, and sustained other damage.
	Petreus - -	- -	Norway - -	- - - - -	Timber - -	- -	- - -	- - -	- - -	Broke her anchor, and became very leaky while in St. Ives roadstead.
Dec. „	La Clorinde - -	86	France - -	Stranded under the Churchyard, in St. Ives Pier.	Iron - -	- -	Cardiff - -	Rouen - -	- - -	Very much damaged.
	Le Grenadier -	78	„ - -	„ „ „	Coals - -	- -	„ - -	„ - -	- - -	„ „
	La Cleopatrè - -	76	„ - -	Stranded on Hayle Bar -	Iron - -	- -	Newport -	Havre - -	- - -	„ „
	Grace - -	- -	England - -	Totally dismasted to the west of St. Ives.	Copper ore -	- -	Truro - -	Port Talbot -	S.S.E.	Towed into the pier.
„ 15, „	Ruby - -	- -	„ - -	Stranded on Hayle Bar -	Timber - -	- -	Richibucto -	- - -	N.N.E.	Considerably damaged.
„ 19, „	Catherine - -	- -	„ - -	„ at the entrance of St. Ives Pier.	Coals and iron -	- -	Newport -	Exeter - -	„	Compelled to run for the pier; vessel much damaged.
	Britannia - -	- -	„ - -	Lost near Trevose Head -	- - -	- -	- - -	- - -	N.N.W.	Afraid to run for St. Ives; crew drowned.
	Schooner, name unknown.	- -	„ - -	„ „ - -	- - -	- -	- - -	- - -	„	„ „
	Lady Anne - -	- -	„ - -	Stranded at the entrance of St. Ives Pier.	- - -	- -	- - -	- - -	„	Crew saved.
	Mary Anne - -	- -	„ - -	Lost near New Quay - -	Coals - -	- -	- - -	- - -	„	Crew drowned.
	Two vessels, names unknown.	- -	- - -	„ „ - -	- - -	- -	- - -	- - -	„	Crew drowned.
	Ebenezer - -	- -	- - -	„ „ - -	- - -	- -	- - -	- - -	„	One man drowned.
1842	Rinascente - -	310	Naples - -	- - - - -	Iron - -	- -	Newport -	Naples - -	N.	Brought into St. Ives Pier in a sinking state, and further damaged whilst there.

(B.)—List of Shipwrecks and Casualties which have occurred between the Land's End and Trevose Head—*continued.*

Date.	Vessels' Names.	Tonnage.	Nation or Place belonging to.	Where Lost or Stranded.	Cargoes.	Value of Cargoes.	From	To	Winds.	Remarks.
1842	Bosphorus	400	England	-	General	-	Glasgow	Jamaica	N.N.W.	Driven into the bay at night, during a very heavy gale, and compelled to anchor in shallow water, near the rocks; 24 hours lying to. Pilots, at the utmost risk of life, boarded her, slipped the cables, and saved ship and cargo.
	Fanny	-	„	Foundered off New Quay	Coals	-	-	-	-	Crew drowned.
	Amelia	-	„	„ near Padstow	-	-	-	-	-	„ „ and captain's wife drowned.
	Balfour	-	„	Much damaged in St. Ives Pier.	Iron	-	Cardiff	Maldon	N.N.W.	Warped in from the roadstead.
	Neptune	-	Hanover	-	„	-	„	Altona	E.S.E.	Run on the beach in a sinking state.
Jan. 15, 1843	Lord Keane	-	England	-	General	-	Cork	Portsmouth	N.N.W.	Compelled to run for St. Ives Pier, and considerably damaged whilst there.
Feb. 18, „	Pearl	-	„	Stranded at the entrance to St. Ives Pier.	Oats, hair, and wool.	-	Ireland	Bristol	N.E.	Obliged to run late on tide for the pier.
	Margaret	-	„	„ „	Copper ore	-	Plymouth	Wales	„	„ „ early on tide for the pier; both vessels much damaged by getting in contact; cargoes discharged.
	Emma	124	„	Struck on the stones in St. Ives Bay.	Coals	-	Newport	Plymouth	-	Compelled to run for St. Ives Pier, having five feet water in the hold; grounded at the entrance.
	Priscilla	-	„	Struck on a sunken rock near Land's End.	Iron	-	Glasgow	Calais	-	Was run on St. Ives Beach in a sinking state.
	Dove	-	„	-	-	-	-	-	N.	Compelled to run for the pier, afterwards hauled in with warps.
	Unity	-	„	Foundered off Padstow	Coals	-	-	-	-	Crew saved.
1844	Meridian	-	-	-	-	-	-	-	N.W.	Dismasted off St. Ives Head, and afterwards towed into Hayle by the Cornwall steamer.
	Euphemia	250	Scotland	Grounded at the entrance of St. Ives Pier, and much strained	Iron	-	Cardiff	Naples	„	Captain washed overboard, and decks swept three days before arrival.
	Prince Regent	-	-	Foundered between St. Ives Head and Zennor.	Copper ore	-	St. Ives	Wales	„	Crew and three passengers drowned.
May „	Mary	119	Ireland	-	Coals	-	Newport	Limerick	N.	After sustaining considerable loss and damage in hull and sails, and one man drowned, compelled to run for St. Ives Pier.
	Lady Anne	-	England	Stranded near St. Ives Pier	Railway iron	-	Cardiff	Lynne	-	Compelled to run for St. Ives Pier in a sinking state; a vessel, which was in company with her, which bore away for Padstow, was lost on the Dunbar sand, and all drowned.
	Fanny (Yacht)	-	Ireland	-	-	-	-	-	-	During a strong gale from west-north-west, bore away for St. Ives Pier; when about a mile from the head discovered there was not water; compelled to try to get up Channel; early the next morning, the wind having somewhat shifted to north, was driven on shore in Bideford Bay, where the crew, with the owner and a friend, were drowned.
	Agnes	-	England	Foundered off St. Agnes	Coals	-	-	-	N.	Crew saved.
	Caroline	-	Guernsey	Dismasted „	Iron and cider	-	-	Bristol	„	Towed into St. Ives.

(B.)—List of Shipwrecks and Casualties which have occurred between the Land's End and Trevose Head—*continued.*

Date.	Vessels' Names.	Tonnage.	Nation or Places belonging to.	Where Lost or Stranded.	Cargoes.	Value of Cargoes.	From	To	Winds.	Remarks.
1844	Venus	-	-	-	Scrap iron and rags iron.	400	Waterford	Newcastle	N.N.E.	Run on St. Ives Beach in a sinking state.
	De Yonge Witcher	68	Zuidbrock	-	-	-	Cardiff	Stettin	N.N.W.	„ „
	Minerva	-	England	Foundered on Trevose Head	-	-	Wales	Truro	„	Crew saved.
	Olive Branch	-	„	Stranded on St. Ives Beach	Pig iron	-	Glasgow	Southampton	-	Run on shore and sunk almost immediately; saved.
	Reward	-	„	Lost on the stones in St. Ives Bay.	Copper ore	-	Plymouth	Wales	-	Crew saved.
	Dorothy	300	„	Stranded, eastern part of St. Ives Bay.	Railway iron	-	-	-	N.E.	„ „ vessel condemned and broken up.
1846	Fenelon	106	France	-	Salt	-	-	-	-	Compelled to run on St. Ives Beach in a sinking state.
	Rover	-	England	-	Pipe clay	-	Pool	Liverpool	-	„ „
	Don	113	Jersey	-	General	-	Liverpool	Messina	N.W.	Brought in in great distress, and one man washed overboard.
	Republican	-	England	-	Salt	-	„	Yarmouth	„	Brought in in great distress: both these vessels sighted the Scilly Light, as did also the Samaritan, of Yarmouth, with a general cargo from Liverpool for Constantinople; the latter vessel was driven into St. Eval's Cove, above Padstow, and totally lost, and nine of the crew drowned; the two men saved reported the master was afraid to run for St. Ives.
	Thomas	110	-	Driven on Peden Olver Rocks	Copper ore	600	Plymouth	Wales	N.E.	Crew saved; vessel and cargo lost.
	Mary Ann	300	-	Abandoned, stranded on the rocks near Moorah.	Timber	-	-	-	-	Afterwards towed to Hayle by the "Brilliant" steamer; cargo sold and vessel broken up.

Vessels have been frequently spoken by the pilots off St. Ives Head, in a disabled state, and would have run for the harbour but from its unsafe condition, the masters preferring to stay at sea, or run up the Channel, when too many have been lost in or near Bude Bay, particularly at neap tides, when only small-class vessels could enter, and then at high water only.

John Tremearne,
Agent to Lloyd's.

(C.)—EXTRACT from REPORT of SMEATON, October 25, 1776, concerning the Practicability of making the Harbour of St. Ives safe for Ships in all Winds.

THE Bay of St. Ives lies about five leagues to the north-east of Cape Cornwall, and is the first harbour of any consequence after the entry of the North Channel; it lies opposite Mount's Bay, upon the entry of the British Channel, and as there is a great scarcity of harbours in the north side of Cornwall, it becomes of consequence from its situation, not only to ships trading through the North Channel, but to such ships as are homeward bound from long voyages—by hazy weather or other accidents which often happen—getting into the North Channel where they intended to make the south.

For these purposes St. Ives Bay is happily situated, and is sufficiently capacious, it being near four miles in width, and about two miles in depth, having in general, and especially near the middle, full 10 fathoms at low water, with a clean bottom, being altogether a white sand, composed almost wholly of the small fragments of sea shells, so that having very little of what is gritty in its composition, and the particles being rounded by the motion of the sea, is so soft and smooth as not to hurt the cables of such vessels as anchor therein; and as underneath the sand there appears to be a blue clay (it being frequently brought up upon the flukes of the anchors), is very good holding-ground, the anchors being never known to drag when drawing towards the land; and for such ships as have not occasion, cannot, or choose not to come upon ground, here is an excellent road where ships of any burthen may ride safe from all north-westerly, westerly, south-westerly, southerly, and south-easterly winds, in six and seven fathoms water at low-water spring tides. But vessels are by no means confined to these places, the water growing regularly and uniformly deeper towards the middle, where the general depth is 10 fathoms; but these are the marks which ships bring up by which use the road, in order to be as much sheltered as possible.

From the sketch of the bay, it appears that the rocks mentioned to be without Godrevy Island, together with St. Agnes and Trevose Point, stretch north as far as north-east by east, so that it appears that the road does not lie quite open, except from the north-east by east; these winds are not, however, dangerous on this coast, as they blow almost right out of the channel; yet it is desirable for the sake of such vessels as come in here for shelter from the north-west and westerly winds, or to prevent being driven back to Milford Haven when outward bound, or towards the Scilly Islands when homeward bound, and caught with contrary winds; I say, for whatever cause it may have been advisable or necessary to come into this road, it is certainly very desirable that they should have a place of refuge in case they are caught with a hard gale of wind from north-east while riding there; for to avoid this possibility, many ships are prevented from making use of the shelter the place naturally affords, and by that means meet with an unhappy fate, that might have been safe in the road at St. Ives, of which there are many examples.

In short, every circumstance seems to invite the completing this harbour for the safety of ships where Nature has been so bountiful.

(D.)—EXTRACTS from LETTERS, &c., chiefly from SAMUEL HOCKING, Esq., St. Ives.

(SAMUEL HOCKING, ESQ.)

St. Ives, October 24, 1846.

THE anchorage of the bay is, as stated to Capt. Vetch, on the 20th October, viz., blue clay, under a thin layer of sand. Chief officer of coast guard authorized Mr. Hocking to assure Capt. Vetch of the fact, and that the best anchorage is in about nine fathoms of water, blue clay with a thin stratum of sand upon it.

(RICHARD KERRICK, ESQ.)

St. Ives, October 26, 1846.

ESTIMATE of cost of stones available for the construction of a breakwater in St. Ives Bay.

Greenstone at the locality of the breakwater, and the rough pieces of granite can be blasted or broken, and trammed into the water for 2*s.* per ton, say 14 feet, and the granite prepared for building will cost 5*s.* 9*d.* per ton, including carriage on the rails.

Same carried in waggons 7*s.* 6*d.* per ton.

(SAMUEL MOYLE, ESQ.)

Truro, November 5, 1846.

ST. IVES BREAKWATER.—The inquiries from old fishermen and pilots agree that the heaviest sea on the western coast of Cornwall is about north-west by west, and with that wind St. Ives Bay is considerably sheltered, and all opinions agree that the best direction for a breakwater is north-west by west, and south-east by east, the last or outer third part curved inwards a little towards the land.

A work at the Merran Rock to protect the present pier, was estimated to cost 5000*l.* (less the value of the material and machinery as sold), but only 2371*l.* 3*s.* 11*d.* was expended.

Of the above sum 871*l.* 18*s.* 1*d.* was paid for raising and depositing the rock, viz., 16,506 tons which averaged about 12½*d.* per ton.

(SAMUEL HOCKING, ESQ.)

St. Ives, November 12, 1846.

THE take of pilchards was a very large one for one day, but larger quantities have been cured in some former years than are at present in the town. More than 25,000 hogsheads were captured in all the seans that were shot, but, as is commonly the case, more than a third part of the quantity either escaped again soon after, or died in the seans, or found their way out of them during the time the tucking was proceeding, which occupied eight to ten days. Full 17,000 hogsheads were secured and tucked. 2,000 hogsheads of the above have been disposed of in the surrounding country, as far as Truro, and 15,000 hogsheads remain in cure for exportation to Italy, and each hogshead contains about 2,800 fish, when well packed and pressed.

The fish, when fresh, are worth from 7*d.* to 8*d.* per long hundred (or 120), of which there would be from 23 to 24 in the hogshead, or say 15*s.* per hogshead, so that the quantity taken up and appropriated might be estimated at 12,000*l.* to 13,000*l.*

(CAPTAIN STEVENS.)

November 19.

THE St. Ives pilot while cruising off St. Ives, spoke a large ship of about 700 tons (blowing a gale from the north north-west); the master would most willingly have come to a harbour had there been one accessible, but unfortunately having no place of refuge, was driven ashore in Carmarthen Bay, and all on board, to the number of 22, perished.

In these last gales the *Samaritan*, schooner, which was driven ashore to the westward of Padstow, was in sight off Scilly light, and might have reached St. Ives if it had offered shelter.

The schooner *Don*, of Jersey, which reached this place, was in the same gale, and was 30 miles north-west from Scilly at the commencement, and had there been a refuge here, would have reached this place before the gale was at its height.

Another schooner came in here which was also in sight of Scilly when the gale came on.

Respecting the anchorage, the schooner *Ono* of this port, about two months since, in heaving up her anchor in this roadstead, actually bent the shank owing to the strength of the ground, and several vessels from time to time have rode out heavy gales in the bay with wind from the north to north-east, and were never known to drive from their anchors.

At time of low water a number of vessels have been driven past this place bound for St. Ives and Hayle, with strong winds from the north-east, and last winter the Cornwall steamer, bound for Hayle, was driven round the Land's End and took shelter in Mount's Bay, in consequence of a severe gale from the north-east, and the *Herald*, another steamer, bound to Hayle, on a former occasion was compelled to seek shelter in Mount's Bay from a similar cause.

Portsmouth Harbour, December 18.

CAPTAIN SHERINGHAM, R.N., gave evidence as follows:—

HAD surveyed the north coast of Cornwall down to St. Ives Bay nearly, but had not surveyed the bay itself; had frequently been there; had several times run round the Land's End to take shelter in Mount's Bay, which he would not have done had the anchorage of St. Ives been sheltered by a breakwater. He considers the answers from St. Ives to the questions from the Tidal Harbour Commissioners to be very fair.

He is of opinion that a breakwater at St. Ives is much wanted, and would prove very useful; that a short length would be a good measure in itself; that it might be of a form, and in a direction, capable of convenient augmentation, as the utility became more apparent, and as the increased necessities and trade of the port should demand.

Captain Sheringham does not recollect any complaints as to the nature of the holding ground, but is of opinion that, if it be not strong enough, the more the necessity for a breakwater. He has observed no tendency to silt up within the present tide-harbour, or vicinity.

(SAMUEL HOCKING, ESQ.)

St. Ives, December 21.

THE tone of your letter is encouraging, and I for one shall patiently wait for the accomplishment of a work which I most seriously believe will be productive of an amount of public good far greater than it would be easy at present to estimate.

Within the last twelve days we have felt the want of shelter in the bay, and although no lives were lost on the occasion I allude to, one vessel laden with a valuable cargo of copper ore, was driven on shore, and two others in ballast were driven away for Hayle Bar; one of them got in, but the other grounded, and remained where she struck for several days; the wind was about north-east, and the vessel that was driven on shore near the harbour went to pieces in two or three hours, and became an entire wreck; the cargo also being mixed up with the sand, is almost all lost.

On another day, the day after, I believe, a boat coming from one of the steamers with only one passenger and two boatmen was upset, and the passenger was drowned.

Both of these disasters would have been prevented by the existence of such a means of shelter as is in contemplation.

St. Ives, January 21, 1847.

I MUST apologize for again intruding upon you at a time when you are so much occupied with important engagements, but I hope you will, as you have already very kindly done, bear with me upon a subject which, in my humble estimation, is one of great national as well as local moment, as viewed either by the merchant or the philanthropist.

That any improvement in our harbour should be provided for by a new Act of Parliament, has long been the opinion of those whose attention has been directed to the subject; but as you have supposed the difficulty anticipated in attempting to obtain a private Act conferring a sufficient tariff for the due accomplishment of the purpose, has hitherto presented an impassable barrier to the progress of local projecture. But at the same time, I may venture to assure you that so strong is the desire of parties resident here to see *some advantage taken of the natural capabilities of the bay*, and so sincere their conviction that a harbour of refuge here is much wanted, and would be an incalculable benefit to the maritime public that they would rejoice to see provision made by a public Act to carry out so important an undertaking.

APPENDIX, No. 22.

2, Delahay Street, Westminster, S.W.,
27th January 1859.

To the Chairman of the Harbours of Refuge Commission.

SIR,

As directed by the Commissioners, I proceeded to Padstow, and repeated the sections over "Stepper Point," their position being ascertained from the tracing furnished for my guidance. I now return the said tracing, with my sections placed thereon, and indicated by a blue line to distinguish them from those originally taken. It will be observed that the profiles agree tolerably well; indeed, I could scarcely hope to get an exact coincidence, owing to the rough nature of the ground rendering the accurate ranging of the lines a matter of great difficulty.

The cutting, so far as I am able to judge, will be almost entirely through "trap rock" of exceedingly hard character, a specimen of which I send for inspection. On the harbour side there is a small quantity of clay slate, which presents itself at end of No. 3 section, and gradually widens up the hill, till it attains a distance of 60 or 70 feet at Section No. 1, and so on round the harbour for some distance. I furnish a piece of this stratification also, and have to the best of my judgment placed the position of each on the sections.

I have estimated the quantity to be cut away at 450,000 cubic yards, of which there might perhaps be 30,000 cubic yards of clay slate.

The portion of the Point cut away by the Padstow Harbour Association was entirely of "trap," and I am assured cost only 7½*d.* per cubic yard, or 5*s.* per cubic fathom. If that be correct it is the cheapest piece of work ever executed in any country, and altogether at variance with the experience of any engineers or contractors of my acquaintance. My informant, however, maintained that the same stone was being quarried every day in the neighbourhood, and broken up into small blocks, convenient for being broken for road metal, at 9*d.* per cubic yard.

A vessel entering the harbour would scarcely get the *true wind* till nearly opposite Clouter Stile. The ground from that point, along the side of fence to where No. 1 section crosses, rises about 1 in 5; I would therefore submit, that, instead of leaving an abrupt face as proposed at No. 1 section, the top should be rounded off in the direction of the dotted line C D on plan, and sloped gradually down to the level of the footpath at bottom.

I have, &c.
JAS. GRAHAM, C.E.

APPENDIX, No. 23.

To the HONOURABLE the ROYAL COMMISSIONERS on HARBOURS of REFUGE.

The humble Memorial of the Port and Navigation Committee of the Council of the Borough and Port of Bridgewater,

Showeth,—

THAT your Memorialists being impressed with the conviction that the Island of Lundy is the most suitable position for a harbour of refuge in the Bristol Channel, humbly submit to your Lordships that it is expedient that a harbour of refuge should be established at that place.

Dated, Bridgewater, November 29, 1858. R. R. WOODLAND, Mayor.

APPENDIX, No. 24.

To the ROYAL COMMISSIONERS upon HARBOURS of REFUGE.

The Memorial of the WARKWORTH Harbour Commissioners, Shipowners, Pilots, and Inhabitants of Warkworth Harbour, in Public Meeting assembled,

Humbly showeth,—

THAT nearly Two hundred thousand pounds have been expended in forming this harbour, by throwing out a pier to the north of the harbour, running in an easterly direction of eight hundred yards long, laid principally with Scotch granite stone, and with a south pier of two hundred yards long in a northerly direction.

That your Memorialists are of opinion, from several years' experience, that, provided the North Pier is extended three hundred yards further east, and a breakwater thrown in a northerly direction from the Coquet Island to shelter the anchorage from north-east gales, as shown on the chart hereto annexed, all the advantages of a Harbour of Refuge can be obtained at a very trifling cost.

Your Memorialists agree with the statements of the prevailing winds laid before your Commission by Thomas John Taylor and William Mather, Esquires, and that this harbour, in conjunction with the Coquet Island, affords safe and good anchorage in these south-east gales; and that the running for Leith Roads would be entirely unnecessary if the North Pier was extended, and the breakwater made from the north end of the Island.

Your Memorialists beg further to point out that this breakwater would enable shipping to anchor in from four to nine fathoms of water, as laid down upon the Admiralty chart, and, with a plentiful supply of stone in the neighbourhood, we have every reason to expect the cost of the said breakwater would not be large in amount.

Your Memorialists have had carefully prepared the number of wrecks which have occurred upon this coast for the last twenty years by Lloyd's agent, Mr. William Muers, and your Memorialists are decidedly of opinion that nearly the most of these disasters, occasioning loss of life and property, might have been obviated if these improvements had been constructed.

Your Memorialists beg to remind your Commission, that whereas nearly all the coal ports to the south have diminished in the tons of coals exported during this year, this harbour has absolutely increased; and that your Memorialists are entirely of opinion that any diminution of coals to London is a decided gain instead of a loss, because nearly the entire shipment to that port are consigned for the best possible markets, and must be sold for what they will bring.

Your Memorialists would further lay before your Commission, that, instead of their coals going round by railway to Shields, the contrary is the fact, and nearly the entire produce from the neighbouring collieries is shipped at this harbour.

Your Memorialists would further inform your Commission of the great importance of this harbour for the resort of boats engaged in the herring fishing belonging to the coast, and also the resort of French and Dutch fishing smacks for the same purpose; and during this last season upwards of one hundred and fifty boats were in the harbour at one time, the points for such fishing being generally from Newbiggin Point to the Farn Islands. The facilities of the harbour give not only a large market for the sale of the fish, and the vast Lighthouse on the Coquet Island affording a splendid beacon for the fishermen.

And your Memorialists humbly pray your Royal Commission, in case the general improvements of harbours should be adopted, instead of one single harbour of refuge at an enormous cost, that Warkworth Harbour may participate in such general improvements, being satisfied that the same, in conjunction with the breakwater formed at the north of the Coquet Island, would be a national benefit.

(318 signatures.)

APPENDIX, No. 25.

Warkworth Harbour, October 13, 1858.

To the HONOURABLE COMMISSIONERS of INQUIRY on HARBOURS of REFUGE.

The Memorial of the Warkworth Harbour Commissioners, Shipowners, and Pilots,

Humbly showeth,—

THAT the Warkworth Harbour has been made at an expense of nearly 200,000*l*.

That the Coquet Roads are most eligible for a harbour of refuge for vessels trading on the north-east coast, and also for all those vessels which generally run for Leith Roads in a south-east gale.

And that your Memorialists desire to be heard in reference to the great capabilities of the above-mentioned roads for the object which your Honourable Commissioners have in view, and beg to append a statement giving a description of the harbour and locality, and showing various points in favour of a harbour of refuge being constructed there.

Signed, for the Commissioners of
Warkworth Harbour,
EDWARD WHITFIELD,
Secretary.

HARBOUR OF REFUGE COMMISSION.

EVIDENCE as to the Advantages of Warkworth Harbour as a safe and desirable Position for a Harbour of Refuge.

The situation of this harbour is about 20 miles north of the river Tyne, and 10 miles north of the harbour of Blyth, and has been formed at the mouth of the river Coquet, at very great expense, as an outlet for a very valuable and extensive district of superior steam coal. A substantial stone pier extending about 800 yards in an easterly direction from the main land, shelters the harbour from the north-east, and renders it at all times safe and commodious. The south pier extends northwards from the mainland towards the end of the north pier, forming an entrance to the harbour of about 80 yards wide.

A red light is exhibited at the end of the south pier when there is 10 feet water on the bar on the flood, and remains until 10 feet on the ebb.

A bar of shifting sand stretches across the entrance of the harbour, a short distance outside the piers, and has at ordinary spring tides 17 and 18 feet of water over it.

The channel of the harbour is about 100 feet in breadth at the narrowest part at low water, and is formed by a stone jetty on the south side of the harbour, extending from the coal staiths towards the end of the south pier. The depth of the channel at low water is 8, 10, and 12 feet, and the bottom is formed of sand and clay.

Considerable improvements have recently been made by erecting a line of wooden piling along the front of the jetty in order to meet the increasing wants of the harbour, by affording greater accommodation to moor vessels alongside. There are now 13 vessels belonging to the port with an aggregate tonnage of 2,169 tons, six of which are first-class vessels, and invariably load at this harbour when employed in the home trade. Other vessels are also in course of construction, and are intended to trade from this harbour.

During the violent southerly gales of the 7th, 8th, 9th, and 10th of December 1856, when so many disastrous losses occurred on the east coast, there were 45 vessels driven to this harbour for shelter. The masters were all highly satisfied with the accommodation, and all of them loaded out with steam coals, except a few that had been chartered elsewhere. Numerous vessels have, on several other occasions taken shelter in the harbour, as will appear by the following statement:—

Year.	Number of Vessels.	Tonnage.
1849	20	1,099
1850	33	1,103
1851	18	644
1852	38	1,968
1853	44	2,188
1854	30	1,694
1855	20	1,134
1856	30	3,205
1857	25	1,561
1858 to June 30	12	884

The following statement shows the number of vessels that have arrived at Amble Harbour from 1849 to 1858, inclusive:—

Year.	Vessels.	Tonnage.	Steamers.	Tonnage.
1849	471	35,299	20	474
1850	479	38,044	43	822
1851	382	33,573	49	911
1852	367	33,968	16	510
1853	427	40,725	32	660
1854	483	50,260	21	428
1855	439	38,316	24	428
1856	488	38,889	14	249
1857	414	45,856	18	240
1858 to June 30	218	22,192	15	198

On the 9th December 1856, there were upwards of 40 vessels at anchor in Coquet Roads, nearly all of which had been driven past their ports during a severe gale from the south-south-east.

By referring to the Admiralty Chart, it will be seen that the position of Amble Harbour possesses great natural advantages for the construction of a safe and most commodious harbour of refuge. The shelter afforded by the Coquet Island alone provides a safe and convenient place of resort in what is called the Coquet Roads, for all ships driven past the river Tyne during a south-east gale, and the following instances may be cited of vessels having resorted there for safety, and saved in most cases:—

November 21, 1846. Several vessels passed south, having been blown past their ports.

January 28, 1847. *Honor*, laden, from Blyth, drove from anchors in Coquet Road, gale east-south-east, and run for harbour at half-tide, lost over bar, and stopped on south pier end.

March 22, 1848. Twenty sail, windbound, in Coquet Roads.

August 1, 1849. Sloop *Pysche* lost on north pier, wind north-east; crew saved.

October 3. Sloop *Adrian* lost on Hauxley Rocks; crew saved; wind south-east to north-east.

December 2. Four vessels in Coquet Roads, Prussian brig *Johanna*, schooner *William*, sloop *Friendship*, and *Firth*. *Friendship*, in attempting to take the harbour at 4 a.m., 3rd, lost on north pier end, laden with stone; crew saved. *Johanna* parted at same time, and driven on the beach one mile to the north, and became a wreck; crew saved; the other two rode out.

At 9 a.m. *Pedestrian*, in making for Coquet Roads, laden, was wrecked on Pan Bush; crew saved; wind south-east.

December 8. *Cadmus*, in attempting Coquet Roads, also got on Pan Bush, fell over; came on the rocks.

December 10. *Ravensworth*, of Sunderland, riding in roads, coal laden, 14 days from Sunderland; leaking, and lost bulwark, &c., rode safely.

March 4, 1850. *Barbara Ann*, lost in Pan Haven; south-south-east gale.

March 30. French sloop *Genges*, lost on north pier end; crew saved.

March 4. *Sewhanna*, sloop; one man lost; nine vessels riding outside to leeward of the roads; all held on.

January 14, 1851. Brig *Scipio* lost on Bondicar; wind south-east.

January 31st. *Alpha* struck on Bondicar.

September 25. *Lady Salteron* rode a heavy gale in Coquet Roads at north-north-east, from 11 a.m. to 6.30 p.m.; supposed to have parted and got clear of the rocks, and foundered.

October 4, 1852. Sloop *Balgonan* and steamer *Rob Roy* wrecked near Pan Haven; wind east-north-east.

October 28. *Marie Gustave* drove on shore at Bondicar. *Economy* parted in Coquet Koads, and came on beach; wind east.

February 23, 1853. *Jane and Dorothy* came on shore at the Salt Pans; wind north.

January 14, 1854. Gale east; *Commerce* driven from anchors in Coquet Roads on beach, 11 p.m.; also the *Elizabeth Adnett;* both light.

January 5. *Science* parted, and drove into the harbour 6 a.m.; 3 p.m. *Earl Newbey*, loaded, brought up in Coquet Road, and brig *St. George*. Midnight *Earl* drove on shore, and went to pieces. 6.10 a.m. *St. George* slipped, and came on beach. At 9 a.m. the *Monarch*, laden, came through south channel of Coquet Roads, drove on the Pan Rocks, became a wreck; crew saved.

January 8, 1854. *Telemachus* and a sloop brought up in Coquet Roads 5 p.m.; east-south-east gale.

January 9. 7 a.m. *Telemachus* parted and came on beach; also the sloop *Heroine*, wheat laden.

January 10. *Catherine Marie* wrecked at

October 6, 1856. Brig *Thomas* drove on north pier a wreck; wind east-north-east; unsettled at midnight.

January 4, 1857. Brig *Gulterus* stranded on Pan Rocks. *Sophie* wrecked at Coldriffe. Schooner *Geirgina* wrecked on ditto.

March 1, 1858. Brig *Nairus*, coal laden, wrecked on Pan Rocks.

The area between the Coquet Island and the mainland is already sufficiently extensive for the accommodation of a large number of vessels, and the anchorage is remarkably good.

By extending a breakwater from the end of the north pier eastward towards Pan Bush, and from Coquet Island northward towards Pan Bush, leaving in each breakwater an entrance for ships driving from the north, north-east, east, and south-east, it would provide a very extensive and perfectly safe place for vessels to resort to during all points of the wind, with a depth of water sufficient at low tide to float the largest class of vessels. By a comparatively moderate outlay a harbour in this locality could be constructed possessing all the advantages of a wet dock, and accessible at all times.

The extension of the north pier would entirely remove the bar, and add very considerably to the depth of the harbour. A plentiful supply of stone could be obtained both from Coquet Island and the mainland at a very moderate cost.

Amount of tolls collected at Amble Harbour from September 1844 to October 1858:—

					£	s.	d.
From	September 1844	to	March	1845	- 186	17	6
„	March	„	December	„	- 353	15	5
„	December	„	July	1846	- 356	14	10
„	July	„	November	„	- 316	2	0
„	November	„	September	1847	- 703	17	9
„	September	„	April	1848	- 333	6	7
„	April	„	May	1849	- 702	16	9
„	May	„	May	1850	- 720	16	5
„	May	„	April	1851	- 739	1	9
„	April	„	May	1852	- 738	15	1
„	May	„	April	1853	- 602	13	3
„	April	„	May	1854	1,043	2	7
„	May	„	April	1855	- 957	19	11
„	April	„	April	1856	- 815	19	11
„	April	„	May	1857	- 908	11	5
„	May	„	May	1858	1,056	0	7
„	May	„	October	„	- 537	4	5
			Total		- £11,073	16	2

It should be stated that the vessels which have been above described as lost or damaged would have been able to ride in perfect security if the piers above described had been made; and it must not be forgotten that there is an excellent lighthouse upon Coquet Island, which would show at all hours of the night the position of the harbour of refuge.

APPENDIX, No. 26.

Blyth, 23d October 1858.

To Her Majesty's Commissioners on Harbours of Refuge.

The Memorial of the Shipowners and Merchants interested in the port of Blyth,

Showeth,—

That your memorialists being deeply impressed with the importance of the subject of inquiry before your Honouable Board as regards the north-east coast of England, and having given the subject their most attentive consideration, would humbly express their opinion, that, whilst there is a paramount necessity that further provision should be made for the safety of the great number of vessels frequenting this part of the coast, nevertheless it appears to your memorialists that one great harbour of refuge, which would only be available for a portion of the shipping during on-shore gales, would not so well provide for the general safety of the shipping and promote the great commercial interests of the country as the extension and improvement of the existing harbours, so as to render them accessible at all states of the tide.

That the port of Blyth, lying immediately to the north of Tynemouth, and accessible at high water to the ordinary class of coasters during the prevailing south-easterly gales, has, in the opinion of your memorialists, strong claims on the consideration of your Honourable Commission, inasmuch as it will be seen by the returns furnished that a number of light vessels failing to enter the river Tyne have found refuge there, even in the original imperfect state of the harbour; whilst, by a moderate outlay, it might be rendered accessible at all states of the tide for the general class of loaded colliers, and thus obviate the necessity of their running all the way to the Firth of Forth for shelter, when prevented by south-easterly gales from entering Tynemouth.

That by the enterprise of private parties an extensive breakwater has been constructed which effectually shelters the harbour from easterly storms; and considerable progress has been made in the deepening and straightening of the navigable channel by dredging, which will provide eventually for the mere local wants of the port, beyond which limit it cannot be expected that private parties should extend the improvements of the harbour; but by the projection of the breakwater now in course of construction an additional 1,000 feet, aided by dredging the harbour, could be rendered accessible at all states of the tide, and thus serve the purpose of a most useful and safe harbour of refuge for the shipping generally for an extensive line of coast.

That entertaining these views, your memorialists would humbly submit that the subject of the further improvement of the port of Blyth is deserving of the favourable consideration of your Honourable Commission.

(108 Signatures.)

APPENDIX, No. 27.

To the Royal Commissioners on Harbours of Refuge.

The Memorial of the Tyne Improvement Commissioners

Humbly showeth,—

That your Memorialists observed with much satisfaction the appointment of a Royal Commission to inqnire into the best means of preventing the lamentable loss of life and property by shipwreck.

That your Memorialists feel the deepest interest in this inquiry, representing as they do the commerce of the River Tyne, in and out of which river pass annually nearly one half of the shipping frequenting the north-eastern ports, and about one eleventh of the whole traffic of the ports of the United Kingdom; and they earnestly hope, that the result of the present inquiry may be the adoption of adequate measures for the saving of life and property on this dangerous and much-frequented coast.

Your Memorialists have already laid before you evidence in support of the views which they have formed as to the best means of affording the required protection against shipwreck, reserving their engineering evidence to be given at your meeting in London.

Your Memorialists believe, that the most effectual means of diminishing the loss of life and property on this coast would be the improvement of the entrances of the existing harbours, and that one or two great refuge harbours would not alone answer the purpose contemplated.

It is found in practice, that the masters and crews of ships invariably press on, almost at any risk, to their harbour of destination, and that if compelled to put back they seek to make their port of departure. This is confirmed by the fact, which Mr. Thomas John Taylor's evidence will establish, that almost without an exception the wrecks at the mouth of the Tyne are of vessels bound thereto, or seeking refuge therein, or which, having sailed from the Tyne, have put back from unfavourable weather. In such cases increased depth, and greater shelter at the entrance of the Tyne, would immensely diminish or wholly remove the risk. The greatest proportion of wrecks at the mouth of the Tyne occur with south-easterly gales, and to light ships caught to the north of Tees Bay, and bound for the Tyne, or ports north of the Tyne, the protection of which a harbour of refuge in Tees Bay would not secure.

And taking a general view, one single harbour of refuge, while it would not meet the most frequent and most urgent cases, would not realize all the advantages which have been set forth even on such a possible occasion as when a sudden gale overtook a fleet to the windward of it, because of the vessels running for it the earliest arrivals would occupy the deepest anchorage irrespective of their size, and larger vessels, as they arrived, might find no anchorage space unoccupied, and be obliged to take the beach, and this on account of the impossibility at any practicable cost of constructing a harbour sufficiently large to allow swinging at their anchors the numerous and always increasing fleets which necessarily accumulate in the coal trade.

Besides this, the enormous estimated cost of any artificial harbour of refuge in deep water, the consideration that it will almost certainly exceed the estimates of its promoters, and the uncertainty that the intended depth of water will be maintained, or that the nautical advantage expected will be realized, must always induce the utmost caution before the national funds are awarded for such an undertaking.

Your Memorialists believe that the application of the public money as they recommend to the improvement of the existing harbours is not liable to these objections, while it would more effectually provide for the safety of life and property.

Your Memorialists feel some delicacy in alluding to the schemes put before you by other parties, but they, as well as the rest of Her Majesty's subjects, are interested in preventing the waste of public money, which would result from its application to schemes, which, if executed at any cost, could not effect the end proposed, though they might improve the financial position of joint stock companies.

Even supposing that a general harbour of refuge could be made at any practicable cost, and of any practicable extent, and that vessels could and would use it, notwithstanding the necessary delay, risk, and expense of doing so, there would remain an urgent necessity still for the improvement of the present trading harbours, for in any case vessels must reach their port of destination, and encounter all the risks of entering it.

The attention of your Memorialists from the time of their constitution as conservators of the river, has been constantly directed to the improvement of the mouth of the Tyne, with a view to the saving of life and property, and they have more that once memorialized the Government for national aid towards the accomplishment of such a truly national object. They have also obtained an Act of Parliament for the erection of piers, taxing the shipowners (who voluntarily consented thereto) in order to raise funds towards the undertaking.

Your Memorialists are now accordingly engaged in the construction of piers at the mouth of the river for the purpose of improving the depth and safety of the entrance. These works are described in Mr. Walker's Report and Plan of November 1853, and the extent of the present contract, and the progress made in its execution, have been already detailed in the evidence of Mr. Messent, the Resident Engineer.

The estimated cost of completing those piers is 400,000*l.*, and your Memorialists have power, and do levy a pier due of twopence per register ton on ships arriving from foreign ports, and one penny per ton on all ships arriving coastwise for the purpose of obtaining the necessary funds. The annual produce of this tax is about 12,000*l.*, and is increasing.

Your Memorialists, encouraged by the appointment of a Royal Commission, and the evident intention of Her Majesty's Government to devote a grant of public money to the purpose of refuge on this coast, requested Mr. Walker to report to them his views as to the possibility and cost of converting the Tyne into a harbour of refuge. His report will be laid before you and supported by his evidence.

By his extended plan the piers are proposed to be advanced into 36 feet at low water instead of 15 feet. Mr. Walker expects that these works will occupy ten or twelve years in execution, but that their beneficial effect will be much sooner felt, and that the result will be to secure a passage of 18 feet depth at low water from the sea to Shields Harbour.

To secure this great benefit, however, an outlay of a further sum of 400,000*l.* will be required, making the total sum necessary to complete the extended piers 800,000*l.*, but this cannot be done without the aid of a grant of the sum of 400,000*l.* from Parliament.

Regarding what the Tyne Improvement Commissioners have done and are doing for themselves, and the great benefit to the country at large which will result from the Tyne being made a harbour of refuge to the extent which will be effected by the piers now in course of formation, and their proposed extension, and considering how vastly beyond the sum named will be found any estimate for any one general harbour of refuge, your Memorialists submit that a contribution of 400,000*l.* on the part of the Government is reasonable and just, and would, in fact, be a contribution by the nation precisely equal to the sum which the port spends out of its own resources to accomplish this great national object.

There is ample accommodation for ships in Shields harbour, which has frequently contained more than 700 ships lying afloat at most efficient moorings. Besides this the moorings in the rest of the Tyne have at the same time accommodated other 500 ships. The Northumberland Dock already opened, and the Jarrow Docks nearly completed, will, together, hold an additional number of 700 ships, making, in all, nearly 2,000 vessels. Such an extent of mooring accommodation, and facilities for classifying vessels according to their size, can be found only in a river harbour. And it is to be remembered that when Shields Harbour, and the other coal harbours are full of ships, it is because nearly all the vessels are in port, few being at sea exposed to danger.

By Mr. Walker's extended piers the largest vessel frequenting the Tyne could find shelter within the pier heads, if necessary, until there was depth of water to pass up, which there would be for a great part of every tide, while the smaller vessels would go up without waiting, not remain to crowd the anchorage within the piers.

Your Memorialists are aware of the objection that the Tyne is liable to heavy freshes or land floods, which cause a very strong outward current at the bar, and prevent vessels entering. This no doubt has happened at rare intervals, but to a much less extent than has been stated. But such freshes or land floods always happen either with westerly winds or in calm weather, and their occurrence is no practical objection to the Tyne as a refuge harbour.

The national aid which your memorialists seek would be repaid not only in the diminution of the immense sacrifice of life and property connected with the coasting trade (which has ever been the best nursery for the hardy race of seamen who have so ably maintained the honour and power of their country), but also by the port becoming a station for small frigates and gunboats, by which the coast and its commerce would be most effectually protected.

Jos. Cowen,
Chairman of the Tyne
Improvement Commissioners.

Tyne Improvement Companies
Office, December 2, 1858.

APPENDIX, No. 28.

The Pilotage System of the Tyne, and its Bearings on the Preservation of Life and Property.

The undersigned, having a strong conviction that the present system and arrangements of the Trinity House of Newcastle-upon-Tyne for supplying vessels bound to and leaving the river Tyne and the adjacent ports with pilots, are so imperfect, and bear so largely on the important objects of the Royal Commission on Harbours of Refuge, that he tenders most respectfully the following statement, in addition to the evidence he had the honour of giving to the Royal Commission at North Shields.

The following Resolution submitted to the River Tyne Commission, upon the 12th February 1857, gives a condensed view of what he deems necessary for the better security of ships seeking for safety in the north-east ports of England.

Enclosure A.

Resolution:—"That when gales prevail from the eastward, and navigation becomes more and more dangerous on the north-east coast, all vessels bound to the Tyne and the adjacent ports (the danger increasing as they approach) are left entirely, in the time of their greatest necessity, without pilots, and the skilful local knowledge so necessary for their safety. That this Board therefore invites the attention of the Trinity Board to the advantages to be derived from the establishment of a well-arranged system of 'pilot cutters,' so constructed as to be able to keep the sea in all weathers and at all times, to supply every vessel bound to the Tyne with an experienced and able pilot, to the greater security of life and property, the extension of the commerce and elevation of the character of the port."

Cases.—The Cobles and their Crews.

In the heavy gale of the 4th January 1854, when 36 ships were driven ashore upon the rocks and sands at the mouth of the Tyne, there was not a pilot on board of one of the wrecked vessels; and during the easterly gales in January of last year (1857), the ships that were wrecked at the same place had also no pilots on board; and thus it is generally in every on-shore gale. The pilot boats of the Tyne—the cobles—probably observed by the Royal Commissioners on their visit to the Tyne, are beautiful little fine-weather craft, about 25 feet in length over all, 5½ feet breadth of beam in their greatest width, and 26 inches in depth, open and undecked, manned generally by three men and a boy, without any shelter to their crews, and dangerous in a sea-way. At the very first indication of a storm, notwithstanding the gallantry of the crews, they flee at once for safety to port. Certain destruction would be their fate did they do otherwise.

It is declared by competent nautical authority that in the gales, especially of 1854, had the Shields cobles been able to keep the sea, and had placed a pilot on board of each vessel, a very large proportion of those wrecked at the mouth of the Tyne might probably have been saved. The crews of the cobles rushed to port only to throw themselves into the life-boats, and return to rescue the shipwrecked crews who would otherwise have perished. Notwithstanding, however, the gallant efforts of the pilots, some did perish. That was good service done, but better still might have been accomplished had they been on board the ships to guide them, by their local knowledge and experience, through the complicated dangers of the storm,—to indicate the sets of the current,—the variations of the course of the gale at the entrance of the port, effected by the direction and contour of the elevated lands,—the channel, buried in white foam,—the bursting breakers and the cross seas. All this at such critical moments being left to the less experienced hands of the masters and their crews.

The want of pilots in easterly gales, next to the want of harbours of refuge, may be said to be chief cause of wreck upon the dangerous north-east coast.

The number of pilots for the Tyne, 260 sea pilots and 80 river pilots, would seem sufficient under better management.

Ships refuse Pilots.

It is stated, as a reason why a better system of pilotage is not adopted, that ships frequently refuse to take pilots. Of the refusal there can be no doubt. It cannot be otherwise. Vessels are left without pilots' assistance when pilots are most required, in the time of storm and danger. Knowing this, the masters and crews prepare to rest their own safety on their own resources and self-reliance when the life struggle encounters them. Did they feel the advantage of pilots in the gale, and in the hour of danger, they would doubtless also freely confide in them on the day of pleasant breezes and fine weather.

Cost of Pilotage to the Tyne.

Notwithstanding this imperfect pilot-service, its cost to vessels trading to the Tyne is very great. There is no return from the Trinity House; but taking, certain recognized data as bases, the amount may be correctly enough ascertained for all practical purposes.

Last year, the total number of ships, British and foreign, inwards and outwards, laden and light, was 41,688. Ships with cargoes generally take pilots when they can obtain them. There were 29,674 laden ships, but deducting one-third for those refusing or not being able to obtain pilots, there will be 19,784 paying pilotage. Now the average draught of water is upwards of 14 feet for such ships, which at 1*s*. 4½*d*. per foot, average charge for winter and summer, and it will have cost laden ships for sea pilotage 19,042*l*. for 1857. For ships in ballast (12,014), calculating that only one-half of them took pilots, and that the average draught of light ships to the Tyne is nine feet, and there were 3,716*l*. more paid for sea pilots, giving a total of 22,758*l*. for last year.

The bounds of the sea pilots extend inwards to Sadler's Point, 2½ miles from the bar, and about two-thirds of the shipping take in and discharge cargo above that point. Add then to the amount just stated, the river pilotage, which is the same price as that for sea pilotage, and by taking only one-half as a basis, which is considerably within the number, and there will be 11,000*l*. more for the pilotage of the Tyne.

Then there are the differential dues, paid by the Government to the Trinity House for the pilots on account of foreign ships, and the primage dues and lights, buoys and beacons charges, to be added to the account. The amount of the differential dues is perhaps still more difficult to ascertain, they are so complicated.

Differential Dues.

In a return of differential dues, to the House of Commons, on the 13th July of the present year (No. 468), it is stated that the Newcastle Trinity House had been paid last year by the Treasury 7,490*l*. 3*s*. 3*d*. It is presumed this sum includes the amount for Sunderland as well as Newcastle and the other ports under the control of the Newcastle Trinity House. It will perhaps, therefore, be necessary to attempt an analysis of those differential dues for pilots, to obtain the amount for the Tyne.

By the 41st Geo. 3. cap. 86., the Trinity House of Newcastle was authorized to charge a differential due of 6*d*. per foot more upon foreign than upon British vessels. This has been secured to the pilots by the law throwing open British ports to foreign shipping on equal terms with British; the British Government paying the extra charge. The sea pilots of the Tyne for six months of the year, April to October, charge 1*s*. 3*d*. per foot on the draught; and for the other six months, October to April, 1*s*. 6*d*. per foot on British vessels. On foreign vessels, then, they charge 1*s*. 9*d*. in the former period, and 2*s*. in the latter; the British Government, as has been stated, paying the difference for the foreign ships. At Sadler's Point, as we have seen, the river pilots take charge, from which to Bill Point, four miles further up the river, they charge 1*s*. per foot; and from Bill Point to Newcastle, about three miles further, 1*s*. 6*d*. per foot. When foreign ships do not employ pilots, the whole charge of pilotage is paid by the Government. The returns for payment are made from tickets professed to have been obtained from the respective masters of those ships by the pilots. Last year, according to the Parliamentary Return on Shipping (No. 260), there were 7,068 laden foreign ships and 1,158 in ballast. The laden ships, though many of them of large draught, are, a very great number of them, much less than the British, By giving, therefore, 12 feet as the average draught, there would be paid, if all of them took pilots, a differential sea pilotage to the amount of 2,297*l*. Now, upwards of one-third load in the harbour, which being out of the bounds of the river pilots, cannot legally be charged river pilotage. There will then be left two-thirds only to pay the 6*d*. on river pilotage, which will amount to about 1,532*l*., making a total of 3,829*l*. About one-fifth do not employ pilots at all, which deducting leaves a balance of about 3,060*l*. for differential dues for foreign ships employing pilots. The unemployed having to be paid for by the Government, at an average rate of 1*s*. 10½*d*. per foot, winter and summer, there will again require to be added about 980*l*. for laden ships, and for light about 480*l*., employed and unemployed; and thus there will be a total amount paid by Government for differential dues of upwards of 4,500*l*. for 1857 for the Tyne. This amount, however, is not presumed to be given as an ascertained certainty, but as an imperfect approximation. The mode in which the Trinity House transacts its business with foreign ships is most objectionable. Allowing the pilots themselves to obtain signatures from masters of foreign ships as to whether they are or are not employed, and the draught of water, and then giving these as the authenticated documents on which the Government is thus heavily charged, is so lax and contrary to all rule, that the sooner a thorough investigation takes place the better. There can, it is believed, be no doubt that errors to the amount of many hundred pounds take place annually in this matter, in its mode of transaction at the Trinity House, without benefit to the pilots, to the disadvantage of the country.

The whole account will now stand thus:—

	£	s.	d.	£	s.	d.
Sea pilotage - -	22,758	0	0			
River pilotage - -	11,000	0	0			
Differential dues - -	4,500	0	0			
Total pilotage -				38,258	0	0
Primage dues - -	1,222	12	6			
Lights, buoys, and beacons	2,297	17	0			
Total of these - -				3,520	9	6
Total upon the Tyne shipping for 1857 -				£41,778	9	6

Trinity House responsible for the want of Pilots.

Notwithstanding the above enormous cost for pilotage to ships trading with the Tyne, it has been seen that they cannot obtain pilots when pilots are most required.

The Pilots not blamable.

The brave and generous-hearted pilots themselves are not blamable for this state of things. Their daily lives, in freely endangering and devoting them for the safety of others, protect them from such a charge. The Trinity House of Newcastle, with its ample means delegated to it for the performance of the great duties of, above all, providing efficient pilotage, is alone responsible. This great evil can scarcely be permitted longer to endure. The remedy is not difficult to be found.

Liverpool System of Pilotage.

The Liverpool system of pilotage shows clearly what efficient and provident arrangements can effect for a great mercantile port like the Tyne. The testimony of nautical men, and the evidence to a Committee of Parliament in 1856, demonstrate its nature and value. Liverpool possesses simply a commission to do the work under an Act of Parliament, 5 Geo. 4. c. 73. It is worked in a similar manner, to a certain extent, as the River Tyne Improvement Commission. There are 137 shipowners, nautical men, and others elected by the Town Council of Liverpool, and these parties so elected choose 13 of their body to conduct the pilotage arrangements for three years.

Pilot Cutters.

Belonging to the port are about 300 pilots, thoroughly educated for the profession. There are 12 pilot cutters, of not more than 100 tons each, of wonderful qualities as sea boats, and of speed scarcely credible. They cost from 2,000*l.* to 2,500*l.* each, and are constructed by the most eminent shipbuilders of the kingdom. Six of these cutters are always at sea day and night, in storm and calm, winter and summer. And while in heavy gales the splendid liners and powerful steamships seek the port in flight, in fear to stir from the docks and moorings, these gallant little vessels keep the sea, guarding the port. Four of them, as advanced guards, are 100 miles to the north and south, while there are two cruising in front of the port keeping perpetual watch, and in gales throwing pilots on board of flying vessels, charged with that skill and local knowledge so necessary for safety at such a time. "We board ships in gales of wind when everything else seeks for shelter," says one of them to the Parliamentary Committee in 1856.

At such a time they run their little cutter under the lee-quarter of the vessel, and in an instant a pilot leaps into the chains, and at once is on her deck. At such a time he is the means and harbinger of safety. The pilot cutter wastes no time there, but darts away at once to perform a similar duty to some other ship. Thus is disposed the pilot crew to the number of 23 or 25, with the exception of those left to take charge of the cutter and carry her into port. They also place themselves in the track of ships and give them instructions, though a pilot may not be required, of the course to be steered, and the dangers to be avoided. It can scarce be doubted that by these skilful arrangements much valuable life and property are saved to that great port. Similar also, to a certain extent, are the pilot systems at Bristol, Portsmouth, the Thames, and Hull, in which pilot cutters are the prominent features of the service. A cordon of the best nautical skill and experience is thus kept perpetually afloat around the whole coast till the jurisdiction of the Trinity House of Newcastle-upon-Tyne commences, when the beneficial system ceases: the good then has finished, and the evil begins.

It is self-evident that similar provident and skilful pilot arrangements as at those other great ports would be equally efficient and beneficial for ships trading with the Tyne and the north-east ports.

Funds of the Newcastle Trinity House.

The Trinity House of Newcastle is able to effect something of all this. In the Appendix to the Report of the Royal Commission on the Inquiry into the Local Charges on Shipping in 1852, page 445, it appears that the money funded and unemployed by that establishment was not much less than 16,000*l.*, which, with the annual increase that is known to have taken place, is now probably not under 20,000*l.*, besides property at Newcastle, Blyth, and North and South Shields. In October of the present year (1858), they lent to the Tyne Commission, on the securities of the Northumberland Dock, a portion, it is probable, of the original funded property to the amount of 14,000*l.* How the proceeds of this capital, and the large amount levied upon the several ports, are expended, the return alluded to only partially demonstrates. But it is impossible to defend the nature of some of the chief items of the expenditure therein detailed; as, for instance, 574*l.* for Trinity House and wine expenses in one year.

Thus they act while death and ruin periodically sweep over the north-east coast, a large portion of which might be obviated by the proper application of this money. There are also good grounds to believe, that that imperfect statement does not contain some of the worst features of the misapplication of what cannot but be considered public funds.

There are 13 elder brethren and ten younger brethren who constitute the Trinity Board.

These 23 gentlemen meet in the Trinity House twice in each month, and, on authority that enables it to be stated with confidence to your Royal Commission, they then and there pay to each other from those funds one and a half guineas at every sitting to each of the elder brethren, and one guinea to each of the younger brethren, making a total of upwards of 740*l.* per annum thus distributed amongst themselves. This item is not found in the return above specified. Whether such an application of the Trinity House funds be a legal one it may well be doubted; that it is not a right and just one, while British subjects and great maritime interests are suffering for want of the true application of such funds, cannot admit of a moment's doubt.

The revenue of the Trinity House, given in the return of 1852 to the Royal Commission, was 5,426*l.* 11*s.* 10*d.*; it is believed the only account of their funds ever published. This revenue, drawn from the shipping of the Tyne, has been proportionately increasing with the great increase of shipping of the port; and though detailed and correct accounts cannot be obtained from this public institution, yet, in the language of that Commission, "it was sufficiently ascertained that the expenses of maintaining the lights and beacons are very far short of the amount levied from ships and goods carried in ships."

Levying primage dues upon the trade of the great port of Sunderland, and the other north-eastern ports, as well as upon that of the Tyne, and levying Shields light dues upon most of the ships of those ports, which never see these lights, and then applying them for private or other purposes disconnected with the interests of those ships or ports, seems so revolting and unjust in principle, and so baneful in practice, that it is hoped some means will be speedily found to rectify the evil.

It has been shown, then, that a very heavy sum for pilotage is paid by ships trading with the Tyne, and notwithstanding that pilots in the time they are most required cannot be obtained. It has been further shown that the Trinity House of Newcastle, the pilot institution, possesses abundant means for supplying vessels in their greatest need with pilots, and if so supplied, that the most beneficial results would accrue to the great objects sought to be obtained by your Royal Commission.

The Trinity House of Newcastle admits the advantages which would be derived from the views expressed in this statement, provided they are effected without cost to itself.

So far back as the beginning of 1857, on two occasions, February 16 and May 7, when the subject was before the Tyne Commission, and public attention had been called to it, the following notices, emanating from the Trinity House, were issued:—

Enclosure B.

"Notice is hereby given to the Owners and Masters of Steamboats. That the Trinity House of Newcastle is prepared to give licences to suitable boats to take pilots to sea to board ships.

"Applications to be made the 1st and 3rd Monday of each month.

"By order,
"JOHN CURRIE,
Secretary.

"Trinity House,
"Newcastle, Feb. 16, 1857."

And

Enclosure C.

"To the Sea Pilots at Shields.

"Notice is hereby given,—it is ordered by this Board that in future you are permitted to go to sea in any steam boat for the purpose of boarding ships or other vessels; but upon all occasions you shall hoist at the masthead of the steamboat you are on board of, a pilot flag.

"JOHN CURRIE,
Secretary.

"Trinity House,
May 7, 1857."

Keeping in view the necessities of this port and the north-east coast, the practice and experience of other ports, and the facts herein adduced, this practical admission of the Trinity House, their large funds, and the duties of that institution, it is clear that a service of pilot cutters or steamers of the best construction, and fitted for such purpose, should long ago have been established by the Trinity House of Newcastle, and which would have been productive of a great saving of life and property on the north-east coast.

It is equally clear, from these considerations, that no delay whatever should take place in the adoption and arrangement of such a service.

Three pilot cutters or steamers able to keep the sea in all weathers, costing less than 8,000*l.*, would do much to obtain the great results contemplated. Nor ought these operations to be confined to the shipping of the Tyne. Nothing could add greater security to the shipping of the north-east ports of England, as well as the Tyne, and be more advantageous to their interests.

Next to the elevation of those ports into harbours of refuge for a shipping as extensive as that of a kingdom; the establishment of a well-organized system of pilot cutters or steamers would conduce, there can be no doubt, most to the saving of life and preservation of shipping property.

It seems only right and proper that each harbour authority should be permitted to organize and sustain, not only its own buoys and beacons, but its own system of pilotage, uncontrolled and untaxed by any irresponsible body whatever, and least of all by one that perverts the great objects of its existence, and surrounds itself with evil.

Perhaps a general commission of all these ports, whose interests in this important matter are as one, would still more efficiently accomplish the object so necessary for all.

Till it be accomplished, in the belief that the Royal Commission on Harbours of Refuge may, by its authority and influence, do something to mitigate the evils flowing from the present system to seamen and shipping, from which the Commission, in its humane and honourable course, is labouring to shield them, this statement is respectfully submitted to its consideration.

James Mather.

The Grove, South Shields,
Nov. 22, 1858.

APPENDIX, No. 29.

To Her Majesty's Commissioners appointed to inquire into the necessity of and best localities for Harbours of Refuge.

The Memorial of the Seamen of South Shields in public meeting assembled,

Respectfully showeth,—That your memorialists are perpetually exposed to wreck on the north-east coast when engaged in their profession, and that a greater number of shipwrecks occur upon this dangerous coast than upon any other of the United Kingdom.

That your memorialists are decidedly of opinion that a single refuge harbour upon this coast would not secure sufficiently the protection of seamen along its whole range, in on-shore gales.

That your memorialists are further decidedly in favour of those ports which your memorialists habitually frequent, and whose marks, bearings, sets of tides, and sea are so well understood by the masters and crews, and which, in all weathers, they struggle to attain, being the best localities for harbours of refuge.

Therefore your memorialists humbly pray that the Royal Commissioners will recommend the Tyne, the Wear, and the Tees, or their immediate localities, as the most fitting and best adapted for harbours of refuge on the north-east coast. Your memorislists further pray that the Royal Commission will be pleased to hear such evidence as they may be able to advance upon this subject; and your memorialists will ever pray, &c.

Signed by order and on behalf of the seamen of South Shields,

Robert King,
Chairman.

APPENDIX, No. 30.

To Her Majesty's Commissioners appointed to inquire and report as to the Construction and Maintenance of a Harbour, or Harbours of Refuge on the North-East Coast of England.

The Memorial of the Committee of the Shipowners' Society of the Port of Sunderland,

Humbly showeth,—

That your Memorialists are elected by the shipowners of Sunderland, and represent the views of that body.

That they have called from time to time public meetings of the Sunderland shipowners, in order to elicit their sentiments on the subject of passing tolls.

That inquiries have especially been made with regard to their opinions on the subject of levying a passing toll towards maintaining a harbour of refuge on the north-east coast.

That there exists at Sunderland but one feeling on this subject—an unanimous and decided hostility to the levying of a passing toll.

That your Memorialists pray to be heard before your Honourable Board, by their chairman and other witnesses, in order more fully and decidedly to give expression to their views.

And your Memorialists will ever pray, &c.

Signed by order and on behalf of the Committee,
Charles Alcock,
Chairman of the Sunderland
Shipowners' Society.

Sunderland,
December 3, 1858.

APPENDIX, No. 31.

Sunderland Harbour.

Statement regarding estimate referred to in evidence of David Stevenson, Civil Engineer.

Construction.—The breakwater to be constructed of rubble deposited from a staging, and brought up to the level of low-water. The slopes are calculated at the rate of from 1¼ to 1 to 6 to 1 according to exposure.

A superstructure of masonry is to be founded in this mass of rubble, the seaward walls to the depth of 6 feet, and the inner walls at 3 feet under the level of low water spring tides, according to exposure. This superstructure is to be raised to the height of 8 and 6 feet above high water, and to be from 30 to 35 feet in width, according to exposure; the stones are to be set on edge and full allowance made for iron strapping.

A gangway of communication fixed on certain of the staging piles, which are to be left for that purpose, will lead to the lighthouse. The gangway will be kept at such an elevation above the breakwater as may be found necessary during the progress of the work, so as to be clear of passing seas.

The pierheads are to be brought up from the bottom with squared masonry.

The total quantity of materials in both breakwaters, as measured in the work, is 388,800 cubic yards, to be got from the limestone quarries in the neighbourhood, and from the freestone quarry at Pensher.

The total estimate for the piers shown on the plan is 300,000*l.* The plan and estimate for deepening the lower part of the harbour are under consideration.

The cost per lineal yard within low-water mark varies from 172*l.* to 213*l.*

Prices.—The prices are as follows:—

Rubble deposited on breakwater, from 3*s.* 6*d.* to 4*s.* 4*d.* per cubic yard.

Ashlar facing of superstructure, 40*s.* 6*d.* per cubic yard; 51*s.* 9*d.* when under low-water line.

Backing of superstructure, 20*s.* 3*d.* per cubic yard.

Pier heads, 33,000*l.*

A lighthouse on south pierhead, with apparent light on north pierhead, 4,000*l.*

N.B.—In addition to the above prices, there is a sum of 10 per cent. added for incidents and staging, amounting in the aggregate to 35,428*l.*

Referred to in evidence of D. Stevenson.
D. and T. Stevenson.

Edinburgh, November, 1858.

APPENDIX, No. 32.

Sunderland Harbour.

Statement regarding Estimate referred to in evidence of David Stevenson, Civil Engineer.

The estimated cost of deepening the River Wear, from Sunderland Bridge seaward to the level of 10 feet under low-water spring tides, and supporting present and erecting new quays, to permit of this deepening being carried out, is 86,110*l.*

The dredging and removal of rock from the bed of river and entrance amounts to 20,843*l.*, and the erection of new and supporting of present quays, to 57,438*l.*, making in all, 78,281*l.*; which, with 10 per cent. added, makes the total estimate of 86,110*l.*

The deep-water area, as measured between the bridge of Sunderland and the North Dock entrance, is about 52 acres.

Referred to in evidence of D. Stevenson.
D. and T. STEVENSON.
Edinburgh, December 14, 1858.

APPENDIX, No. 33.

FORMULA for calculating the Reductive Power of Harbours, by THOMAS STEVENSON, F.R.S.E., Civil Engineer.

THE formula for calculating the reduction in the height of a wave after passing within the entrance to a harbour is as follows:—

$$x = \mathrm{H}\frac{\sqrt{b}}{\sqrt{\mathrm{B}}} - \frac{\left(\mathrm{H} + \mathrm{H}\frac{\sqrt{b}}{\sqrt{\mathrm{B}}}\right)\sqrt[4]{\mathrm{D}}}{50};$$

where H = height of wave at entrance, in feet.
b = breadth of entrance, in feet.
B = breadth of harbour at place of observation, in feet.
D = distance from mouth of harbour to place of observation, in feet.
x = reduced height of wave at place of observation, in feet.

When H is assumed as unity, the formula assumes its simplest form—

$$x = \frac{\sqrt{b}}{\sqrt{\mathrm{B}}} - \frac{\left(1 + \frac{\sqrt{b}}{\sqrt{\mathrm{B}}}\right)\sqrt[4]{\mathrm{D}}}{50},$$

and x will come out a fraction which will represent what may be called the *reductive power* of the harbour at the point for which the calculation has been made; and by multiplying the height of any wave at the entrance by the fraction x its reduced height is found at once.

This formula is the result of much attention which I have given, since the year 1844, to the action of waves in harbours. It is founded partly on the conclusions arrived at by Dr. Thomas Young in 1807, in his theory of undulation, and partly on observations. These observations included the determination of the centres from which the wave expands, and which appear to be situated not far from the middle of the entrance.

This formula has been tested by direct observation at Macduff, Sunderland, Fisherron, Buckie, and Kingstown. At the last-mentioned place the observations were kindly made for me, during a heavy gale from the north-east, by my friend Mr. Mallet, civil engineer. Those at Buckie extended over a long period of time, and include upwards of 2,000 observations.

The method of applying the formula is to describe a circle on the ground plan of the harbour from the point of union of the lines of the piers produced seawards, or what appears to be sufficiently near, from the middle point of the harbour entrance. The radius adopted must be equal to the distance (D) between the centre of divergence and the spot on either of the piers where the reductive power is wanted. The arc of a circle thus described must extend so far as to intersect the two side walls of the harbour, or, in cases where one of the piers meets the shore at a shorter distance, the arc must be extended to the line of direction of the shorter pier produced. It is necessary to observe, however, that in such cases as we have supposed, where the shore intervenes, the formula is not applicable, unless the beach slopes in such a manner as to allow the waves to spend themselves freely. The distance B is then measured as a chord between the two points of intersection. It is believed that this formula will be found to be of general application in all cases where the entrance is of a direct and simple nature.

In order to show the correspondence between the results of calculation by the formula and the actual observations, reference is made to the accompanying table, which contains averages of the observations at the places to which we have referred.

Name of Harbour.	Calculated Reductive Power.	Observed Reductive Power.
Buckie, 1st point of observation - -	·649	·534
Do. do. do. - -	—	*·570
Do. 2d do. do. - -	·464	·323
Do. do. do. - -	—	*·394
Do. 3d do. do. - -	·233	·207
Do. do. do. - -	—	*·342
Do. 4th do. do. - -	·186	·157
Do. do. do. - -	—	*·289
Do. 5th do. do. - -	·143	·136
Do. do. do. - -	—	*·158
Do. 6th do. do. - -	·119	·139
Do. do. do. - -	—	*·175
Do. 7th do. do. - -	·209	·222
Do. do. do. - -	—	*·289
Do. 8th do. do. - -	·274	·232
Do. do. do. - -	—	*·368
Do. 9th do. do. - -	·427	·339
Do. do. do. - -	—	*·491
Fisherrow, 1st, on west side - -	·478	·472
Do. 2d, on east side - -	·430	·384
Macduff, 1st, 165 feet from inner entrance - - - - -	·440	·600
Do. 2d. 340 feet from do. -	·420	·532
Sunderland, 1st, at stairs on south pier, at entrance to beaching ground -	·440	·385
Do. 2d, at entrance to south Dock - - - -	·1015	·1023
Kingstown - - - -	·307	·374

The results marked thus * are derived from a series of observations made during the great gale of November 1857, which was so fatal to the fishermen on the coast of Banffshire.

Referred to in evidence of D. Stevenson.
D. & T. STEVENSON.
Edinburgh, November 4, 1858.

APPENDIX, No. 34.

REPORT of Capt. GEO. AUGUSTUS BEDFORD, R.N., to accompany his SURVEY of HARTLEPOOL BAY, for the Harbours of Refuge Commissioners.

I HAVE the honour to report, for the information of the Harbours of Refuge Commissioners, the results of the survey of Hartlepool Bay, executed by me in the months of November and December 1858, in obedience to their instructions, at whose disposal I was placed by the Lords Commissioners of the Admiralty.

The chief object of this survey was to determine, by a comparison with former surveys, the changes that had taken place in the depths; and it originated from the contradictory evidence given before the Commissioners in their inquiries relative to the eligibility of Hartlepool Bay as a site for a harbour of refuge.

The previous Admiralty surveys with which comparisons were to be made were those of 1838, by Capt. Slater, R.N., and of 1846, by Mr. E. K. Calver, R.N., and the three strictly correspond with each other, being on a scale of about 15 inches to a nautical mile, the soundings taken as nearly as possible over the same sections, and reduced to the same level.

Besides the foregoing, there were corresponding annual surveys made by Mr. W. O. Mossman, Haven-master of Hartlepool, who had been for several years employed under Capt. Slater, R.N., and assisted in his survey of 1838, and whose thorough knowledge of his profession, and accurate habits, give a value to his observations.

In the execution of this survey I was ably seconded by my assistant, Lieut. T. B. Horner. The soundings were taken by an experienced and trustworthy leadsman of my own staff, and every cast came under my personal scrutiny, while the tide observations were recorded every ten minutes by the leading man of my staff, well accustomed to the work. In this respect, therefore, we were entirely independent of local interference, while every needed assistance was cheerfully rendered by the local authorities of both harbours; and I am especially indebted to Mr. Mossman, whose personal knowledge of the previous surveys was most essential.

I shall endeavour, as concisely as the subject will admit, to lay before the Commissioners the results of this examination, and the conclusions arising therefrom, while bearing in mind the main purpose involved in the inquiry. Indeed, so much has been expressed on the peculiarities of Hartlepool by engineers and marine surveyors as to render preliminary explanations almost superfluous.

Three illustrative sheets accompany this report, No. 1 representing the survey; No. 2, the state of the bay in December 1858 compared with that of 1838; and No. 3, the comparisons of the surveys of 1858 and 1846.

Assuming the limits of Mr. Calver's survey of 1846 as the area of comparison, the mean of all the soundings of each of the three surveys give the following average depths:—

		Feet.		Feet.
1838	average depth,	11·110	decrease,	0·906
1846	„ „	10·204	increase,	0·357
1858	„ „	10·561		
From 1838 to 1858	- -		decrease,	0·549

Mr. Mossman's averages for 1846 and 1858 over the same area, though absolutely greater in quantity, bear a relative proportion; and the difference may in some measure arise from his having sounded over only half the number of sections.

His results are as follows:—

	Feet.		Feet.
1846 - - -	10·852	increase,	0·221
1858 (summer) -	11·073		

It appears, then, that from 1838 to 1846 there was a decrease in the average depth over the comparative area of nine tenths of a foot; while from 1846 to 1858 there is shown an increase of about one third of a foot according to my survey, and of a quarter of a foot nearly by Mr. Mossman's.

I perceive that the soundings in Capt. Slater's survey of 1838 are expressed in fractional parts of a foot only in depths below two fathoms; so that, in instituting a comparison with those that exceed that depth, it will depend on the method he adopted in the reduction of the soundings to low water, whether we have increased or diminished the difference between the two surveys compared. For instance, if in consideration of his datum line being (as it really is) one foot below the mean low water of spring tides, he had reduced his soundings to the nearest foot *above* the actual depths, then the assumed differences exceed the truth. But, on the contrary, if the minimum depth has been taken (a common practice with surveyors), then the amount of silting up has been greater by half a foot or more than that shown in the comparisons.

I deem it important to notice this circumstance, as it leaves a margin for doubt, and it is at the same time worthy of remark, that the greatest differences shown in Mr. Calver's comparison chart occur generally in the depths above two fathoms.

Assuming, however, that the quantities given in Capt. Slater's survey exceed the truth, even then there remains no reasonable doubt that, in the period between it and Mr. Calver's re-examination, the bay had undergone a deteriorating change, which deterioration seems also to have been antecedently progressive according to Mr. Curtis' report, which I find extracted in that of Mr. Calver of the 31st March 1855, on the proposed harbour of refuge in Hartlepool Bay.

The operations connected with the formation of the two harbours, which occurred in the interval between 1838 and 1846, involving excavations, and the escape, at least, of some of the soil,—the intermittent and partial access of the tide into the slake, and the frequent recurrence of severe sluicing to remove the deposit that had accumulated,—and, especially, the suicidal act of breaking up and removing the rocks around the Heugh, and thereby accelerating the ruin of the already cavernous and rapidly-wasting cliffs, may all have combined to aggravate the deposit of that period; but, doubtless, the usual natural causes were independently doing their work of mischief.

The general characteristic features of the changes that had occurred in the period in question, as shown in Mr. Calver's comparison chart, are, a shoaling over about two thirds of the bay; the deepening to three quarters of a foot over a belt of about 500 feet wide, skirting the low-water shore between the Long Scar Rock and the west harbour; and also of an irregular patch in front of the east harbour bar, to nearly the same amount.

The comparison chart of 1858 and 1846 (my No. 3) exhibits, in some degree, an inversion of these features, and a small approach towards the state of 1838 about the central parts.

At both periods the disadvantage has been in the northern half of the bay, the decrease in the first having been greater, and the increase in the latter period less. And notwithstanding the apparently favourable change that has taken place in the average depth of the bay, as indicated by the recent re-examination, the increase on the northern side has been of an irregular character, or in alternate pools and shallows; and, unfortunately, the latter are more disadvantageous than the former are beneficial.

In fact, there seems to be a progressive shoaling opposite the breakwater and beacon, extending perniciously across the northern half of the bay towards the Long Scar, and reaching the usual anchorage ground.

The cause of the increase of depth in the other parts of the bay, can only be conjectured, and I am inclined to attribute it to the suspension of the deteriorating circumstances before noticed, combined with an increase of sea setting round the Heugh in consequence of the removal of the rocks, but chiefly to the great traffic that has sprung up within the last 12 years by the new harbour addition, thereby producing increased agitation in the waters, and checking deposition. Perhaps, also, the new harbour piers, by reducing the circuit of the tides, while increasing their intensity, may be included among the agents.

The extent of Mr. Calver's soundings in 1846 do not admit of a comparison with the depth of the Heugh; but it will be seen in Sheet No. 2 that there has been an increase of depth near the rocky foreshore, then a decrease over an extent seawards of a quarter of a mile in breadth, averaging about two feet, outside of which the depths again become greater as compared with the survey of 1838.

I shall now glance at the physical conditions of the bay and their probable effects.

The projection of the Heugh throws off the southerly set of the flood-tide, and causes it to sweep round and fall principally on the southern side of the bay, where it is checked and deflected by the Long Scar into a feeble eddy that moves round the bay, and makes its exit round the Stone and Heugh Rocks. The ebb passes out in the same direction, and both have a tendency to deposit sand in the bight in which the old harbour is situated, and on Middleton Strand between the two harbours, as well as the northern shore of the bay.

The intrusion of the west-harbour piers beyond the low-water line has deflected the stream further from the bight; and the edge of Middleton Strand, on the northern side of the piers, has advanced in like manner with the north pier, while a considerable accumulation has taken place, especially in the northern half of Middleton Strand, as well as on the inner side of the stone jetty which covers the approach to the tide harbour.

Before the north pier of west harbour was altered, both in extent and direction, as it now stands, the heavy waves were deflected by it right over to the old harbour with injurious effect. Now these deflected waves are turned more to the northward; and, after running through and producing a wild commotion among the regular undulations, and bursting their mingled crests into huge cauliflower heads, finally expend themselves on Middleton Strand, towards the middle of the stone jetty.

These cross waves have probably had some effect in deepening the water outside the low-water margin of Middleton Strand, and towards the old harbour, not with any benefit to that port, which, undoubtedly, has not been improved in its natural conditions by the interposition of its rival, that has been formed in a more favourable site.

The action of the south pier of the west harbour has been to divert the impinging waves to the Stranton shore, and to scour away the surface sand, exposing the underlying beds of peat and clay, in which abundant remains of an ancient forest are mingled. These waves fell with destructive force upon the high-water shore of Newburn, and compelled the building of a strong facing wall to protect the clay banks. The same effect would be produced on Seaton Carew by the proposed southern pier of the harbour of refuge.

The reason why the two piers have an opposite effect, or rather a less effect in one than the other, is partly owing to their direction with respect to the waves that strike them. In the case of the south pier the wave meets it at an acute angle, and is conducted along its outer face to sweep the beach with a scouring force, while the north pier receives the blow nearly at right angles, and deflects it as I have previously described. This pier and the stone jetty act as groins, and confine the sand between them.

There has been a diminution of the sand beach on the south-west of the inner end of the Long Scar, principally produced, I conceive, by the removal of the rocks embedded in the clay for building and road purposes. I was informed that the greater part of Seaton Carew was raised out of these materials.

Seaton shore has undergone a considerable waste by the action of the sea lashing and undermining the clay cliffs; and this has been hastened by the quarrying the blue sandstone that is found mingled with the soft marl of the New Red Sandstone formation. The cliffs have, in consequence, been faced with masonry to protect the houses that stand on its brink.

The northern shore of Hartlepool Heugh, composed of cliffs of magnesian limestone and clay, varying from 20 to 40 feet in height, dipping to the south-west, and perforated into numerous caverns and arches by the destroying action of the sea, is wasting away at an alarming rate, and demands immediate remedy by the building of a protecting wall. The changes in the coast line since 1838 and 1846 will be seen represented in Nos. 2 and 3.

Outside these cliffs extends a rocky foreshore of an average breadth of 300 yards, the base of the lost cliffs, which must have afforded much more protection to the bay than it now enjoys.

At rather more than half a mile from the Heugh, and commanding the dock and tide basin of East Hartlepool, and also the slake, commences a range of sand hills that skirt the coast for two or three miles to the northward, with a corresponding breadth of sand beach.

The ruins of the cliffs and rocks lie at their base—round the Heugh—in the shape of beach-worn rubble and shingle.

Regardless of the rapid encroachments of the sea upon the contracted site of the town, the rocks around the Heugh have been quarried for harbour works and for lime. The consequence, as might have been foreseen, has been an increase of wave-stroke upon the bases of the cliffs, and a proportionally increased ruin, while the shingle, gravel, and triturated débris has been transported to swell the deposit in the bay; and I am disposed to think the chief supply of materials, composing the bottom and shores of the bay, comes round the Heugh by the prevailing strength of the north-easterly gales and flood tide, but mainly by the progressive action of the waves on the shallow shore; and to this cause I attribute the increase of deposit shewn to have taken place on the eastern side of the Heugh, and of the shoaling across the mouth of the bay already described. Gravel and shingle are forced into the bay as well as sand, and may be traced on the Stranton shore, while the fishermen state, that it has filled up and made smooth the foul ground off the beacon, where formerly their nets used to catch.

The breakwater or eastern pier, erected about 1854, seems to have had an influence (as such projections usually have) in deepening the adjacent bottom, by arresting, and then throwing out, an increased force of sea; and in doing this, may have assisted in the formation of the shoal in front. A sandbeach has also gathered on the western or sheltered side of the breakwater that did not exist before.

A good deal of coaldust is spread over the bottom of the bay, which consists of an uniform brownish sand containing minute particles of white crystals and yellowish rock, and, so far as I could ascertain by the microscope, a very small proportion of shelly matter. If muriatic acid be applied, there is great effervescence, which I believe to be caused by the presence of the waste of the limestone.

How far the shoaling across the bay may proceed, it is impossible to predict; but the consideration of the circumstances that I have thus attempted to sketch, have induced me to come to the conclusion, that if a harbour were to be constructed here—one that would shut out the effects of the sea round the Heugh and the merely partial action of the stream,—would be preferable to the scheme that, instead of doing so, would rather aggravate the mischief, by conducting the moving materials into the harbour.

The open harbour or detached breakwaters would probably maintain its depth outside the line joining the Heugh and Long Scar; but I do not see how it would prevent the progressive shoaling across the entrance, which the comparison of my soundings with those of 1846 seems to show.

I confess that I had assumed an open harbour to be the best, until I had studied the nature of the site, and the physical forces apparently in action; but having no particular theory to bolster up, and being convinced that all localities have their peculiarities, and cannot be treated alike, I do not hesitate to confess that, in the event of a harbour being made here, I am inclined to advocate an enlarged scale of the late Mr. Rendel's plan.

Another reason for thinking so arises from the doubt I have respecting the extent of the good holding ground.

The instrument I used for ascertaining the nature of the subsoil was the same as that used by Commander E. J. Bedford at Peterhead and Fraserburgh. It admitted of being driven three feet through the soil by a weight working on the shaft of the borer.

About the central parts of the bay and within it, we were enabled to drive the borer to the full extent, bringing up a kind of muddy sand similar to that on the surface, mixed with small pieces of dust of coal, but without touching the clay that is said to come up on the anchors, though sufficiently binding to constitute good holding-ground. But on the outer parts, beyond a line joining the Heugh, and extremity of the Long Scar, we were never able to drive the borer to any depth beneath the sandy surface. These experiments may not be considered conclusive, but they were the best that our means allowed us to make; and I am therefore not prepared to speak confidently as to this portion of the bottom, whether it is or is not good holding ground; but I am inclined to think it is not.

We know that the Long Scar projects some considerable distance to the eastward; and I suspect it is much the same in the line of the Heugh, and it there distinctly crops out in a depth of ten fathoms. These facts, combined with our experiments, induce me to infer that only a shallow covering of sand overlies the rock.

If this be correct, the more sheltered harbour would, on this account alone, be preferable; while the accommodation would be considerably greater over an equal area.

It is manifest that a general harbour of refuge, constructed in front of two thriving ports, possessing, in themselves, an annual traffic of 20,000 vessels, must necessarily be very capacious to permit the weather-bound to anchor out of the way of those that are passing to and from the ports.

The uncertain and merely speculative opinions that have been advanced in support of the different kinds of harbours show the difficulty of the question; and also, that in dealing with a locality such as Hartlepool, where the natural forces in operation are complicated and uncertain, and which is the case with most indentations through which the tide does not set fairly and equally each way, we are only increasing the difficulty.

Having read Mr. Calver's report of the 31st March 1855, on the proposed harbour of refuge at Hartlepool, I will merely observe that it does not alter my opinions, while I generally concur in the arguments contained in that of the late Mr. Rendel.

The examples quoted in condemnation of Mr. Rendel's plan (I refer to the principle, *not* to his particular harbour,) have but a remote analogy; for if a position had to be chosen that should silt up as rapidly as possible, perhaps none could so well have been selected as Howth, which stands like a basin under a funnel charged with sand and water.

Lowestoft and Grimsby are admitted to be less favourably circumstanced than the preceding; while the instances of the obliteration of natural havens and estuaries have so little in common with a work standing prominently into the sea in deep water, that it seems unnecessary to argue upon them. And while Kingstown Harbour maintains its utility, there is some substantial reason to hope that a similar work upon a larger scale might do the same.

I might ask where the sand came from that fills the inner part of Dublin Bay. Was it formed on the spot, or brought in by the sea? If the latter, then it must have been charged with sand, and this, together with the propulsive action of the waves on the bottom (which seems to be ignored) formed the beach. And in on-shore gales, I presume the water of Dublin Bay outside Kingstown Harbour are still charged with sand without doing much mischief to it; and in which, at such times, there is agitation enough to drive vessels from their anchors.

Neither has there been a fair distinction made between harbours whose entrance is shallow, and exposed to the heavy action of the storm-wave upon the bottom, and that which opens in deep water where the force and effect is materially reduced.

No one, I presume, will contend that such a harbour will not receive a deposit; but in one so spacious as it ought to be, with a deep entrance, it would probably not be sensibly injurious over a long period.

The same effect would also follow with detached breakwaters of whatever kind, by the interception of an amount of agitation that now acts in Hartlepool Bay; and, although it would be in a less degree from *this* scource, still the injurious action of cross and unequal currents, over double the period of time, and charged more highly with matter, inasmuch as it would bring in the scouring of the shores, might make up the difference, leaving the advantage of a comparatively quiet anchorage to the credit of the close harbour, where also the necessary dredging operations might be carried on, when they could not in the other.

I believe the entrances of both the ports, but especially of the east harbour, could be maintained in a better condition within a close harbour than they are at present, where the bar is continually moved in by the action of the waves, after being scoured away by sluicing.

With regard to the rapid silting of Victoria Dock, it must not be supposed that all is due to the action of the sea.

The situation and natural conditions of East Hartlepool are far from favourable to the efficient maintenance of its channel and docks. What might have answered very well for the small craft of ancient times, was no criterion of its adaptation to the present state of things. There was nothing very encouraging in its antecedent fate, although the facility of re-excavating its ruins, and the proximity to the coal fields, was a great temptation to its revival: but no one should feel surprise that—situated in a deep recess, with shallows in front, and sand hills and sand beach close to its rear, a considerable quantity of which must be blown into the harbour during northerly and north-east gales, added to the coaldust that must escape from a discharge of a million tons annually, together with the refuse from the vessels that, with every precaution, will find its way into the docks—these receptacles should silt up two or three feet in 14 years.

During a gale that blew between south-east, and east by north, I saw the sand blowing from Middleton Strand into the slake, and north-west corner of the west harbour, as well as over the inner part of the stone jetty.

Sand is in this way dispersed over the vicinity of shores favourable for its deposit; and in the course of my extensive survey of the west and north coasts of Ireland, I have observed its destructive effects in laying waste cultivated fields and gardens, and choking up inlets of the sea. It must not, therefore, be inferred that, because the action of the sea and the depths near the shore seem to be in a state of equilibrium, that sand is not still advancing. Every on-shore gale drives a quantity inland, and the beach is not reduced.

I saw the silt that was dredged out of the west dock while I was at Hartlepool, and it consisted almost entirely of mud and coaldust, and the deposit had been about two feet in 11 years.

With regard to Mr. Calver's recommendation to proceed with the breakwater as originally designed by the Act of 1851, I am of opinion that it would be highly injudicious. It would stand directly in the course of the outlet of the stream, tend to increase the shoaling on the northern side of the bay—which is, unfortunately, too shallow already, where the depth is most required—and it would tell most injuriously upon the east harbour; it would probably produce a deposit in the centre of the bay, and after all it would afford very little protection, even in north-east gales, and none whatever in south-east gales. I very much doubt whether the present breakwater is really of any benefit, except in protecting the cliffs within it.

Sluicing from the slake is resorted to principally to lower the bar of the east entrance. It is a temporary measure, applied at uncertain times, according to the state of the bar, the average depth of which is about three feet, but, at the time of my survey, about two feet, seven inches.

The last sluicing recorded was the 9th of October, or about two months previous to the survey; and I extracted the following record of the number of times in each year:—

1854 - - - -	6 times.
1855 - - - - -	12 „
1856 - - - - -	8 „
1857 - - - - -	13 „
1858 to 9th October - -	17 „

There cannot be a doubt that the practice of sluicing must be injurious to the bay; and more, perhaps, than is supposed, from a misconception that the natural action of the sea, and the artificial effect of the sluicing, are merely like the closing and opening of a door—or, in other words, that the bar removed by sluicing is again returned by the sea; whereas there is no necessary connexion, for the sand of the bar may be driven out to a different spot than that from whence it is replaced by the sea, so that its effects might spread over a considerable space. The light particles that may be scoured out from the reservoir and tide harbour may soon be dispersed; but some of the coaldust that is spread so extensively over the bay probably has its origin in this way.

Were a harbour constructed here sluicing must cease, and the slake made convertible to more general purposes; for it is preposterous that so large an area should thus be shut up exclusively for a sluicing reservoir. But if no outer harbour were made, I still think the East Dock Company should make their own reservoir, by inclosing and deepening a sufficient portion of the slake instead of appropriating the whole of it.

Sluicing has been resorted to occasionally at the west dock, but in a very small degree, as, according to information received from Mr. Jackson, they had not allowed the water in the dock to fall more than two feet. The west harbour is prohibited by its Act from sluicing, but the east harbour, being the first formed, had no such restriction placed upon it. But if it be injurious in one case it is also in the other; although it may be urged that in the west dock sluicing the scoured matter is carried towards the other by the general set of the tide stream. There is truth in this part of the argument, but both injure the bay.

The sluices of the east harbour are sometimes kept closed, and the free communication of the tide with the slake intercepted, to prevent the inconvenience which the stream causes in berthing the vessels when numerous.

THE COATHAM SHORE.

Having completed the survey of Hartlepool Bay, we next proceeded to carry out the remaining portion of the Commissioners instructions "to run a few lines of soundings " along Coatham Beach to the northwest of the Scar, in " order to ascertain whether any change of depth had taken " place in that neighbourhood since the date of Capt. " Hewett's survey in 1825."

A steamboat was placed at our service free of all expense by the liberality of the East Harbour Dock Company (the same offer having also been made by the other port). In the two days in which we were engaged in this examination, the sea was so smooth that we were enabled to sound up to the edge of low water, and, in a few places, to pass within it.

Our limits of examination extended from the Tees Fairway Buoy to abreast the Salt Scar, a distance of three and three quarter miles, bounded seaward by the line of the Seaton Lights, and inshore by the edge of the sands.

Comparing our soundings with those of the Admiralty chart, I find that our 10-fathom edge off Redcar and Coatham approaches nearer to the shore, and the depths outside the five-fathom edge are generally greater by nearly a fathom; but as we approach the Tees these differences become less apparent, and in some instances are two or three feet shorter.

On the whole, there is a remarkable agreement considering the close proximity to the river.

The depths are everywhere regular, gradually decreasing to the shore; in fact, except close to the beach, there is not, I believe, a single instance of unevenness, but on the contrary, the bottom represents an uniformly inclined plane, spread over by an invariable fine muddy sand.

Our soundings have been laid down on the Admiralty chart.

GEO. AUGUSTUS BEDFORD,
Capt. and Admiralty Surveyor.

Rathmallan,
County Donegal,
12th January 1859.

SUPPLEMENTARY REPORT.

My attention having been drawn by the chairman to several subjects, as contained in his memorandum of the 5th of November, I have endeavoured in the following Report to answer the several queries so far as I have been able to obtain the required information.

Some of the points referred to being necessarily involved in the preceding Report, are there treated.

First, as to the waves and their effects.

In on-shore gales the whole of the bay, and as far as the eye can reach, seems to be one sheet of broken water. Mr. Hunter, master pilot, of Hartlepool, considered that it extended as far out as 15 fathoms depth.

It is particularly heavy near the Heugh, where the tide is strongest.

But the general appearance of the sea in a storm depends much on the force of the wind acting on the crests of the waves, as also upon an opposing tide, and must not be confounded with breakers that are due to the heights and velocity of the swell moving over comparatively shoal water. If the wind were suddenly arrested, the same height of wave would not in itself produce a breaker in that depth of water.

Accustomed to the heavy roll of the Atlantic on the western coast of Ireland, which, in a calm, will sometimes break on shoals 8 or 10 fathoms deep, the wave off Hartlepool in a strong south-east and easterly gale seemed to me of small dimensions; but the short, wall-like, and broken seas of tidal and shallow waters are more injurious and trying on vessels.

I conclude the heaviest ground swell off Hartlepool would not break in a depth of four fathoms.

It is generally considered that north-east gales bring down the heaviest seas on the shores. The force of the wind from this quarter, according to the Meteorological Records, is the greatest. But very heavy ground swells are experienced after a succession of north-west gales; and this is easily accounted for from its source being the Atlantic.

As an instance, among others that have been recorded showing the progressively percussive force of the sea at the bottom, which some seem to doubt, I may here mention a circumstance that I found inserted in the journal kept by the buoy master of the Tees, Mr. Lister, who resides at Staton Carew.

In the severe gale of 12th February 1853, wind east by north, the globe of the Tees buoy (which is not buoyant) attached to an iron spindle, weighing about 1¼ cwt., was broken off by the violence of the sea, and, of course, sunk in a depth of 25 feet at low water, or about 40 feet at high water. On the 15th February, or three days after the occurrence, it came on shore opposite the buoy house at Seaton Snook, having been forced along the bottom a distance of more than one mile.

All the waves conform more or less to the shores, but fall heaviest where the radius of their sweep round the Heugh is greatest. They are, therefore, felt more on the Seaton shore than in the northern bight of Hartlepool; but there would be no difference half a mile off the Heugh. (I allude to those waves that roll in from the northward and eastward, and not to those that come straight into the bay).

Standing on the west harbour piers, the swell (even with the wind at north west) would be seen coming in from the stone buoy, while at the latter it would be setting towards Carr House, thus sweeping round 45° in its progress from the stone buoy to west harbour. At the Long Scar buoy the swell would, at the same time, be setting south-west by south, or towards Seaton Snook. These are the results of my own observations made expressly.

Secondly, on-shore winds bring in the greatest quantity of seaweed into the bay. A vast quantity is always floating about or lying at the bottom, and, of course, is drifted in when a gale blows towards the shore.

Doubtless one season of the year is more favourable than another, on account of the vegetation of different kinds; and spring and autumn seem to be most favourable for disengagement from the rocks on which they grow; it is so with us in Ireland.

The question of coal drift is of more difficult solution. No one that I conversed with had any distinct opinions on this subject, although it has been a source of supply to the coast inhabitants from time immemorial. At Seaton Carew they derive their fuel almost entirely from what is drifted on the shores, where, as I have just noticed, the sea falls heaviest. I have seen a good deal of small coal and dust gathered on the northern shore, and in the west corner of the west harbour after a continuance of south-east gales.

Neither the local wrecks nor sluicing from the harbours will account for the quantity that is found in the bay and along the northern shore; it is, therefore, reasonable to infer, that coal seams may crop out in the sea, and be broken up by the force of the waves; but I could not gain any information as to the existence of any submarine protrusions near Hartlepool.

The river Tyne, the great source and centre of the coal mines, must discharge a good deal of dust into the sea; and the former practice of "keeling," (that is, filling up vessels off the harbours by "keels," when there was not water enough inside) at Sunderland, and, I believe, at Blyth at the present time, may also add a share to the drift.

In my researches round the shores I discovered layers of coal dust in the sand hills that skirt the coast between Hartlepool and Seaton Snook, and even in the stratum of sand that overlies the limestone cliffs about the 'Far Well Field,' on the north side of the town. The depth of this superincumbent sand is here about five feet, covered with a sward that has, perhaps, existed from remote times. The cliff on which I found the seams is about 20 feet above high water. The coal dust is arranged in two or three thin layers, six or eight inches apart. Neither here nor along the Seaton shore are they confined to the sea face, but are to be traced in the interior also, where sections have been exposed. Those on the cliffs, like the limestone rock, are arranged horizontally, as if formed under water. In the Seaton sandhills they are sometimes conformable to the irregular contour of the hills, but I found some immediately overlying the red marl or clay, several feet below the top of the sandhills, which may be presumed to have been there, perhaps, before coal was carried by sea.

Amongst the coal drift that I examined on the beach north of the town I found cinders, which will be seen in the specimens preserved. I naturally concluded, at first, that they must have been thrown from some passing collier or other vessel, or been carried out by some of the northern rivers, but searching into a description of the geology of Durham, I found that the coal fields are traversed by basaltic dykes, which, in their intrusion, have charred and cindered the adjacent coal. The "Great or Ninety-fathom Dyke" enters the sea about three miles north of Shields, and there may be others, which cannot be seen, protruding into the sea further south along the Durham shore. Although I do not contend that the presence of these cinders among the drift is at all conclusive, it affords, nevertheless, circumstantial evidence that coal drift may be derived in this manner, and also adds another testimony to my belief, that the general drift of sea matter is from the north and not from the south, as some suppose.

It would have taken far more time than I had at my command to follow out this interesting inquiry.

The accumulations of beach sand on the open shore north of the Heugh are said to fluctuate very much with the direction of strong gales, the northerly winds and waves sweeping and washing the sand from the underlying rocks, which then become visible, and are again covered over by gales from other quarters, or the quiet action of the waves.

The sands of Tees Bay are liable to frequent changes, principally depending on the alteration of the position of the channel, and the loose character of the South Gare.

As an exemplification of the latter, I may instance the wreck of the *Neptune*, of Hull, 500 tons burthen, lost on the South Gare 32 years ago. Mr. Hunter, Tees pilot, visited the wreck two tides after the occurrence, and found her buried to her catheads, thus showing the loose and deep character of this sand.

The North Gare is said to be of firmer consistence, and to rest on rock that has been reached by boring at a depth of 12 feet below the bed of the channel; but of this I have no authority beyond Mr. Lister, the buoy master.

The action of the sea is gradually to push the outer spit of the South Gare towards the west, diverting the bar channel with it, until the course reaches about north-west, and the balance of power is transferred to the ebb stream and freshets, which burst through and restore the channel to a north-east course. The period of these oscillations is, on an average, about eight or ten years.

Mr. Lister informed me that the accumulation of sand over the buoy sinkers sometimes amounted to seven or eight feet in the course of a few months, as the edge of the channel moved, and the mooring chains have frequently to be cut to disengage the buoys for removal.

Mr. Hunter confirmed this statement, as also the supposed injurious tendency of the works that are being carried out in the upper part of the Tees Channel on the bar, which is now in a worse state than before known, the depth having been only five feet since June 1857, whereas the average depth used to be from seven to nine feet. From what I can judge of these works as they are shown on the Admiralty chart, I hold the same opinion.

In consequence of the moveable character of the sands near the mouth and lower parts of the channel, it happens that wrecks that took place in one state of the channel become, like the buoy sinkers, covered over, and again exposed after a long period.

Fourthly, relative to sluicing.

I have already treated on this subject in my preceding Report. During my stay at Hartlepool, the operation of sluicing did not take place, in consequence (I understood) of the number of vessels in the tide harbour; but the effect on the bar is so well established, both by the action and cessation of sluicing, as to leave no doubt on my mind that if it were altogether suspended, and the sluices removed, without deepening the slake, the channel could not be maintained at the bar; for the present wave-stroke would overpower the action of the harbour stream.

Fifthly, as to the condition of vessels employed in the coal trade.

As far as I have been able to glean from credible and disinterested parties, it seems unquestionable that a large proportion of colliers are vessels that, like old horses, have lost "their marks," and been excommunicated from foreign service, and thrown on the market, to be sold at low prices, —some for 400*l.* or 500*l.*—and bought by shareholders out of earnings derived from business that gives them no knowledge or experience of what vessels ought to be. They are then covered by high insurance in the "clubs" or local insurance companies distinct from "Lloyd's," and sent to sea,—many of them to perish with their crews,—whilst the owners live on the insurance. But, alas for the widow and the orphan! they touch not the spoils. I trust there are not many of this class of shipowners: but there have been some.

The present very depressed state of the shipping interest is such, that many owners cannot afford to repair their vessels properly, and they are thus kept running too long, though unseaworthy. For the same reason, they are mostly under-manned. Many have not more than two able seamen before the mast, and, perhaps, three boys, captain, and mate; whle foreign vessels of the same tonnage would have at least half as many more.

An "old basket" is a common expression among the crews for their vessels, and a very significant one too; for pumping seems to be the chief employment. When such leaky vessels are caught in a gale the small crew becomes soon exhausted, and can make little effort to save their craft, or keep her off the land; having no confidence in the soundness of their vessel, their chief care is naturally to save their lives by running away for a port, or beaching if they cannot reach one.

I was informed by a respectable captain of a collier that nearly all the vessels are too deeply loaded, and are no better than "half-tide rocks," on which heavy seas tumble, and sometimes break in their decks. His brig of 223 tons, new measurement, carried 380 tons of coal, filled up to the "very eyes." Such vessels, becoming leaky, get so much by the head that, if they have not forward pumps fitted, they could not keep her afloat.

The present pay is 4*l.* per man per voyage to London and back; but, so long as a vessel remains in port waiting for her cargo, neither master nor man receives wages. The consequence is, that there is a great rush to get into port first, in order to be soonest discharged and reloaded; so that, if a fleet of 200 or 300 sail are collected by adverse winds, no sooner does a change take place than great competition ensues, for the last may, probably, have to wait three weeks before she is reloaded, and so, perhaps, lose a good freight. In this way many risks and losses are incurred by recklessly running down on their port where there is not water enough to enter.

The screw colliers are generally overloaded. The *Hunwick*, that left West Hartlepool on Sunday, 8th November, and of which Lieutenant Horner and I exclaimed "How deep she is!" foundered on her voyage to London near Yarmouth Roads. The crew had been pumping the whole way.

Two or three vessels of this description, out of Hartlepool, have foundered in consequence of being overloaded. One of these had to return into harbour ere she had passed the Heugh, as the sea was making a clean sweep of her decks; and they were obliged to discharge 100 tons of coal ere she proceeded on her voyage. The same was afterwards lost with her crew.

It thus appears that a class of vessels, the substitution of which for the "old basket" might reasonably have been supposed to lessen the risk, is still made very dangerous by loading them beyond their capabilities. And in this opinion I believe I should be supported by every unprejudiced witness of the *Hunwick's* departure from Hartlepool.

I fear the life of the sailor is not sufficiently considered in these cases. God may take care of the widow and the orphan; but the insurance will cover the owner's risk.

It is a pleasure, however, to learn that there are some especially whose principles are to employ only thoroughly sound and trustworthy vessels, that are not only able, but whose masters have orders to keep to sea, instead of bearing up with every single-reefed topsail breeze. With such vessels the losses are rare.

Sixthly, the examination of the journals kept at the Heugh Lighthouse under the direction of Mr. Mossman, and which do him great credit on account of the valuable information he has embodied in them, and the regularity in which they are kept,) show that the most prevalent winds throughout the year are between west and south-west; the next prevalent are from north to north-east, while their force stands pre-eminent. From extracts made between December 1853, to the present time, I find that, while the northerly and north-east gales, in which casualties occurred, or were reported rather, amounted to 14 those from the south-east were only five or six.

That *invariably* those gales which were rendered especially dangerous by a sudden change of wind, and from moderate weather to a storm, occurred with a *low barometer;* and had a prudent and reasonable attention been paid to this indication of a coming storm, most of the wrecks would probably have been avoided. But unhappily, I fear very little attention is paid to this useful instrument; and owners are too anxious to force their vessels to sea to be deterred by what may after all (they flatter themselves) only prove a false alarm, though the barometric state indicated a hurricane. The Meteorological Department of the Board of Trade is one of national benefit, and it is to be hoped their instructions and advice—the result of sound, and patient, and laborious investigation—may produce more cautious habits among those "who go down to the sea in "ships, and do business in great waters." For this purpose every port should have its public barometer in a conspicuous place, and under the care of the harbour master, who could, by some signal or danger-flag show when it was not prudent to put to sea. Common caution in matters of this kind would render harbours of refuge much less necessary, and without which caution even they will not prevent wrecks.

It seems to be the usual practice for vessels leaving port with an on-shore wind to make two or three points of offing; but the short cut, I think, is as often preferred. And as with very low barometer it is common for the wind to veer suddenly from westward and south-west to the opposite points, and at once blow a gale, so many vessels are caught close in-shore, and unable to reach an offing.

Seventhly, relative to the harbour works of West Hartlepool.

This harbour is emphatically an "induction harbour," or one growing out of the close observation and experiments of its very intelligent and enthusiastic founder, and not on any pre-established plan. Compared with others, it may, I think, be termed unique; and so far as I am able to judge of the effects of the peculiar constructions from my own personal observation, I should say that they will most probably accomplish their intended purpose.

The pier heads—once round, on the usual plan—are all as sharp as a "cut-water," which, indeed, is the term applied to them. The impinging waves, instead of rebounding back, and producing a turmoil at the entrance, are split, and mainly diverted right or left along the piers, especially the south pier, which, as I have before described, meets the wave at a more favourable angle than the other.

The portion of the wave that enters the harbour is arrested by the succession of breakwaters, or, as they are expressively termed "wavetraps," which conduct the undulations to the inner corners of the harbour, and produce smoother water over the general area. As the waves are always greatest on the south side of the harbour, these wavetraps have there been more fully developed.

By observations I made when a rough sea was coming into the bay, I found that a wave that rose on the south pier head 15 feet—

At 1st wavetrap within was	-	-	8 feet
2nd „ „	-	-	4 „
Dock wall „ „	-	-	2 „

showing the subduing effect of the arrangement.

But the effect of these "wavetraps" was to carry the sand also to the recesses, and there to form a beach; and from this arose another step of induction, namely, to make openings at these places to permit both the wave and the sand to escape.

At first, the exterior wave that dashed across the outlet a the western corner opening on Newburn Strand, overpowered the interior action. To meet this, the aperture was being reduced, and the covering pier extended until the desired effect should result.

Mr. Jackson, the genius of the port, designs a somewhat similar arrangement with the "wavetrap" on the northern side, so as to remove the accumulation of sand forming at its intersection with the pier.

The idea of the openings, though it may have originated in Mr. Jackson's own mind, had been tried a few years ago in the small harbour of Mullaghmore, on the coast of Sligo, belonging to Lord Palmerston, where I first heard the idea broached, and which was, I believe, successfully carried out after I had left that part of the west coast. It is especially useful in small harbours, where the entering wave-volume bears a large proportion to the included area. For when there is no outlet for the wave to expend itself it rebounds into the harbour, telling destructively on the moorings of the vessels, and causing them to strike heavily on the bottom, while the sand carried in by the wave is accumulated at the upper recesses, and gradually chokes up the harbour.

I consider the formation of the piers, both in their inclination to the general stroke of the wave, and also in their outer terminations, so as to divide the sea and divert it from the entrance, to be of great importance, and worthy of more consideration than it receives from harbour engineers: and probably some useful hints might be gathered from this experimental Port of West Hartlepool.

I have thus endeavoured, though, I fear, very imperfectly, to lay before the Commissioners such information as I was able to collect in the short period of time occupied in my survey. I will briefly advert to a few other points of interest.

There is a deficiency in the day and night signals of these tidal harbours, that requires amendment. At present a flag or ball is hoisted at half-flood, and hauled down at half-ebb, during daylight; and at night a red light is exhibited at the Heugh, and in the leading lights into the harbour.

Now, in this wide range of tide, there is no precise information conveyed beyond the extreme limits. A stranger might be bearing down without a local pilot—how could he tell with any confidence whether it was high water or half-ebb? Even the pilots cannot tell to two or three feet, on occasions of stormy weather, when the tides are very irregular and they have been from their port a few hours. How uncertain and hazardous must it be to a stranger!

Arrangements have been made for one of the tug boats at each port to have a pilot's licence to carry them out to meet vessels in the offing; for hitherto vessels have depended on boats, which could not go out in storms, and only boarded them when they were close in.

Out of 140 instances of wrecks or casualties recorded in the Heugh Lighthouse Journal, I find 44 were occasioned by attempting the harbours *when too late for the tide*.

There is a seeming recklessness in the manner in which vessels dash at the bar, without knowing, or seeming to care, what may be the result. *This* only they know, however, that the bottom is sand, a good beach under their lee, lifeboats near and gallant hands to man them—therefore life is safe, the "old basket" is well insured, and could not find a better or more fitting end.

Most certainly, if this bay be enclosed by a harbour, another cemetery must be found to inter the worn-out colliers, which, it would seem, are seldom broken up in any other way, and whose timbers are sometimes so loose as to be taken out "with a shovel."

Geo. Augustus Bedford,
Capt. and Admiralty Surveyor.

To the Royal Commissioners
on Harbours of Refuge.

APPENDIX, No. 35.

To Rear Admiral Hope, C.B., Chairman of the Royal Commission appointed to inquire into the subject of Harbours of Refuge.

Sir,

I have the honour to return the chart of Tees Bay by the late Captain W. Hewitt, R.N., showing on it the plan for a refuge harbour submitted by me to your board on the inquiry held at Redcar on the 21st of last month.

The blue lines forming the northern division of the harbour represent the transfer of the northern pier from the Salt Scar to the East Scar, an alteration which has the effect of diminishing the cost of the work.

Combining this work with the southern or Marske breakwater, shown by the red lines, my estimate for both works will be as under:—

	£	s.	d.
East Scar pier, 5,297,653 tons, at 1s. 3d. - - - -	331,103	6	3
Marske breakwater, 10,992,375 tons, at 2s. - - -	1,099,237	10	0
	1,430,340	16	3
Add 10 per cent. for the usual requisite additional works, and contingencies - - -	143,034	1	5
	1,573,375	17	8

As the above estimate is made upon a much larger section or quantity of material to be used than is usually given, I feel confident in stating that the harbour can be completed within my estimate, and that I can procure responsible contractors who will undertake it; and this remark will apply also to my other estimates.

It will be observed by your board that I have, on the same chart No. 1, suggested a deviation, so as to make the refuge a close harbour, by connecting the southern work with Huntcliff Foot, as per blue lines.

Through the southern cant of this work a future entrance may be provided by previously conveying the material for the outer work across it on timber gearing, as at Portland Harbour, in case such an entrance be deemed necessary.

The completion of this design will provide a much larger sheltered anchorage, inasmuch as that given under the lee of the southern work alone, during north-east gales, amounts to 1,638 acres having two fathoms and upwards; 1,470 acres of three fathoms and upwards; 1,224 of four fathoms and upwards; 984 of five fathoms and upwards; and 702 of six fathoms and upwards, at low water of spring tides.

The high-water area of this close harbour amounts to 4,304 acres, and the low-water area to 3,696 acres; the estimate for forming the whole being as under:—

	£	s.	d.
For the East Scar pier, 5,297,653 tons, at 1s. 3d. - - - -	331,103	6	3
For the Huntcliff pier, 16,251,085 tons, at 1s. - - - - -	812,554	5	0
	1,143,657	11	3
Add 10 per cent. for lighthouses, and the usual additional works, and contingencies - - -	114,365	15	3
	1,258,023	6	6

It will be obvious that the formation of the Huntcliff pier or mole alone, at an ultimate cost of 812,554*l.*, will afford the sheltered anchorage calculated above of 1,470 acres, having a depth of from three to eight fathoms at low water of spring tides; and as there will, in the execution of this work be no interruption by bad weather, the supply of stone being also close at hand and inexhaustible, there will be nothing to prevent this great extent of sheltered anchorage being obtained in seven years.

Even in the present state of the great natural moles called the Salt and East Scars, considerable protection will be afforded from the north to north-north-west; but it is also to be noticed that for 6,400 feet of the length of the East Scar pier the quantity of material required to form it to the full dimensions shown in the accompanying section can be deposited in 800 working days, at the rate of 2,000 tons a day.

I may here observe, that if any doubt exist as to the possibility of a close harbour being free from deposit on this most advantageously situated side of Tees Bay, it will be easy to construct any extent of open gearing or pier work on the summit of the East Scar, where the latter is bare at the last quarter ebb, or on the submarine portion of the same Scar, over which, for many hundred feet in length, the depth does not exceed nine feet at low water. In a similar manner open work or gearing, to allow the tide to flow through, may be constructed on the rocky foreshore forming the base of Huntcliff, the area of which latter may also in part be advantageously appropriated as a site for docks.

I have in this, as well as in the other designs, allowed unusually easy slopes seaward, so as to set at rest all doubt of the permanency of the structure when formed of sandstone, or the material which forms the cliffs of the northern coast of Yorkshire, extending from Filey Brig to Huntcliff. Before a Commission so happily constituted of scientific and practical men there is no apprehension in my mind of the plans on this account suffering by a comparison with other designs, where precautions as to stability may not be taken to the same extent as by myself.

The vast supply of cheap material, for the formation of the piers contiguous to them, has made me unhesitatingly recommend the system of long slopes seaward for the deep-water work; but should it be considered advisable to provide dock or other accommodation either at Huntcliff on the south side of the harbour, or between the ridges of shale forming the East Scar and Jenny Ligh's Scar, it will then be preferable to at once form the East Scar pier, or the Huntcliff pier harbour wall, of masonry.

Between the East Scar and Jenny Ligh's Scar docks of the most capacious nature may be constructed out of the alum shale strata at an extraordinarily low rate of cost per acre, and without the smallest risk of failure; the foundation of the north wall, for instance, being at a level of about four feet above low water of spring tides for a length of above 5,000 feet, while that for the southern side of the dock also bares before low water to a similar extent. The intervening space, consisting also of shale impervious to water, is nearly dry at low water, and can be readily laid bare for excavation to any required depth by the construction of a clay and stone dam between the outer ends of the East Scar and Jenny Ligh's Scar, where the same are bare at low water.

I have, lastly, to beg to be allowed to submit design No. 3, upon chart No. 2 of the Tees Bay, by the late Captain Wm. Hewitt, R.N., which will be found free from the objection entertained of the presence of "the High" in the former designs, the small patch of rock remaining having on it above three fathoms at low water of a clean ebb, and being also out of the line of the anchorage ground, as well as situated at a distance of above three and a half cables from the pier heads.

If deemed advisable to remove it altogether, so as to make four fathoms over it at low water, this may be effected at a cost of less than 1,000*l.*, the extent of shoal rock being very limited.

I have on this subject also to remark, that during on-shore gales the tide does not fall out within half a fathom of its usual level at low water of spring tides.

It is now upwards of twenty-six years since I first designed a harbour of refuge at Redcar, and of the various designs I have made since that time, I have always, with but one exception, proposed what is called a close or pier harbour for the south side of Tees Bay. The exception was the design which your board honoured me by giving attention to at your inquiry at Redcar; and I have now to state that it was specially made to form a contrast with the design for an open harbour formed by a breakwater at Hartlepool, with which I knew it really had to compete, the Select Committee on Refuge Harbours of last Session having judiciously pointed out the situation of Tees Bay as the best on the coast, or most capable of affording the greatest range of utility to vessels embayed between Flamborough Head and North Sunderland Point. Tees Bay has also been properly described as "the great focus of the wrecks" which take place during on-shore gales, or when refuge is alone really required by a cautious mariner.

When the subject is one of life or death to the tempest-tossed mariner, it is painful to witness the attempts made to make inexperienced people believe that the greatest danger arises from south-easterly gales, as is fully set out in a work recently published, called "Ships and Gales," by a native of South Shields; a work which is, however, perfectly harmless when brought before practical men, whether seamen or landsmen, who know that the great loss which is registered as arising during those gales is not due to them, as they are only along-shore gales, but to the want of prudence in running for shallow bar havens at an improper period of the tide,—a practice which will be inexcusable, even on the score of unseaworthiness, when a deep-water refuge harbour is available at the conveniently situated locality of Tees Bay, whether on the Hartlepool or Redcar side. In my mind no doubt exists of such a harbour having the effect of rendering the navigation of the north-east coast comparatively safe; so much so, that ships will be able to often make their own ports in on-shore gales at a proper time of tide, from the knowledge that their efforts to get to them will not expose those on board to the danger which exists at the present time from the want of a deep-water harbour in a good leeward position. It is, therefore, a matter of certainty that a capacious deep-water harbour of refuge in Tees Bay will, by rendering the navigation more safe, be of use to the whole of the coasting trade, although the vessels engaged in it may not often actually enter it for refuge.

The question, then, to my mind, in the consideration of the proper site for a harbour of refuge, is one simply of cost of construction in the first instance, and cost of maintenance in the second; by which latter I do not merely mean the cost of maintaining the works, but especially the cost of preserving or maintaining the depth of water which now exists. It would be unworthy, in a question of life and death, such as is that of the formation of a refuge harbour on this coast, for any one to exaggerate the difficulties in any case, or to conceal the advantages which reflection upon the subject may point out for any work which may appear to stand in rivalry to another more immediately proposed; and for this cause, before finally giving a detail of the harbour which is delineated by me on the chart No. 2 of Tees Bay, which represents a close or pier harbour, and therefore of a much less expensive character of construction, I think it only fair to state, that in my humble opinion it ought also to be compared with a close or pier harbour at Hartlepool on the opposite side of Tees Bay, for the following reason, which, I believe, must have caused the late eminent engineer, James Meadows Rendel, to adopt that mode of construction.

The harbour, if made at Hartlepool, should be a close or pier harbour, so that it should be subjected to the least amount of deposit, viz., that brought in by the water of the flood tide; whereas if a refuge harbour or roadstead were made there by means of a detached work, or breakwater, it is only reasonable to believe that deep water could only be maintained where the current has a free range through it, or from the outer end of the Long Scar to the northern outlet east of Hartlepool Heugh. The turbid waters of the Tees, and the highly-charged water of the bay, where it is shoal, would be at all times, but especially during south-easterly gales, brought in but to have the disastrous effect of shoaling rapidly up the whole of Hartlepool Bay, west of a line drawn from the outer end of the Long Scar to Hartlepool Heugh. For the above reason it would, in order to get a larger area of refuge harbour anchorage, be necessary to carry out the breakwater into at least nine fathoms water, leaving a wide passage between the north end of the breakwater and Hartlepool Heugh, in order to avoid forming a race of tide there by the concentration of the discharge through it of the waters of the estuary of the Tees, and those of the western division of the bay itself, which would naturally take the shortest course to the northward, or through the roadstead. In any case a harbour, such as that proposed for Hartlepool by the late Mr. Rendel, would be of immense value to the trade of the place, but to make it a perfect refuge harbour for general purposes it should be greatly enlarged; but here, again, the late Mr. Rendel evinced his sound judgment in not producing a work so extensive as to make it impracticable on account of the great expenditure which would in that case be indispensable, by reason of the deficiency of suitable stone within a reasonable distance from the works.

By the arrangement of the piers at Hartlepool so as to form a close harbour with an easterly entrance in deep water, the only deposit within the harbour will be that arising from the supply on the flood tide being from a shore current passing over a sandy coast, and that which remains of the turbid water of the estuary of the Tees, which may travel back on the early flood tide.

Having thus, I trust, fairly explained the true position of Hartlepool, I will now shortly explain why I have given the preference to the southern side of Tees Bay.

The water on the south side of the bay is more limpid or uncharged with sand or silt, firstly, because the supply comes from an offing current on the flood tide, the shore current, as I have already shown, being the supply for Hartlepool Bay and the estuary of the Tees.

The supply to the Redcar or southern side comes, therefore, over deeper water, or where the bed of Tees Bay is not disturbed by gales of wind.

It is altogether free from the injurious influence of the highly-charged water from the Tees, which all takes its course *viâ* Hartlepool.

The depth, seaward of the works proposed by me, is so great that it will not be possible for the harbour to shoal up by any action of waves upon the bed of the sea outside.

The coast for many miles to the southward is a bold rocky shore, the cliffs rising up from deep water, so that there is a total absence of all sand or shingle to travel along it towards the harbour.

The land or coast is easy to make, the cliffs adjoining the harbour, called Huntcliff, and Redcliffe, or Roacliffe, rising to the heights of from 600 to 800 feet above the level of high water; while the hills inland are of bold outline, affording excellent leading marks to the harbour, the conical hill called Roseberry Topping having an elevation of 1,020 feet, and Upleatham Moor 650 feet, above the level of the sea, the latter being at a distance of about a mile in the rear of the harbour, and its western end in a line with Roseberry Topping, leading direct for the harbour's entrance.

The next great advantage which the southern shore of Tees Bay has over the Hartlepool side, is the greater extent of good anchorage ground, which I shall again give in detail, for the purpose of affording a comparison with any design which may be made for the Hartlepool side; and, lastly, on the subject of comparison, I must refer to the inexhaustible supply of stone of any required size which may be obtained close to the harbour on the southern side of the bay, whereas at Hartlepool there is nothing but the soft magnesian limestone, and the limestone at Throston, which, though hard, is so small that it is only fit to be used when made up into blocks with cement.

Resuming my account of the harbour proposed by me on the south side of Tees Bay, as shown by the red lines on chart No. 2, the northern pier is proposed to be constructed on the rocky ground called "the Batt" and "the High," being the same site as planned by me for a pier so far back as the year 1834, and terminates in a depth of four and a half fathoms at low water, with a foundation of rock for the pier head, and it will therefore be practicable to form the latter of masonry from its base.

The southern mole or pier will commence at Huntcliff Foot, and passing over nearly the same ground as a similar work shown by the blue lines on chart No. 1, but in rather shallower water in its northern division.

The high-water area of this design on chart No. 2 is 3,270 acres, and the area at low water of spring tides is 2,704, of which 1,106 acres have a depth of from five to eight fathoms, and 1,374 acres a depth of from four to eight fathoms, at low water of spring tides, the whole being clean anchorage ground.

I have also calculated the extent of anchorage under the lee of the southern work or mole during gales from the north-east, as follows, viz.,—1,386 acres having two fathoms and upwards at low water of spring tides; 1,272 acres having three fathoms and upwards; 1,072 acres having four fathoms and upwards; 860 acres having five fathoms and upwards; 540 acres having six fathoms and upwards; and 322 acres having seven fathoms and upwards, at low water of spring tides; the depth at the harbour's mouth being also seven fathoms at low water, and its width being 2,000 feet.

My estimate for this design for a refuge harbour is as under, viz.:—

	£	s.	d.
For the northern pier, 4,403,358 tons of rubble, at 14*d*. per ton - -	256,862	11	0
For the south pier or mole, commencing at Huntcliff Foot, 14,822,595 tons of rock, at 12*d*. per ton - -	741,129	15	0
	997,992	6	0
Add to the above for contingencies, lighthouse, and other pier works, 10 per cent. - - -	99,799	4	0
	1,097,791	10	0

It is necessary for me to state that in the pier or close harbour estimates I have generally deducted one-fifth of the sectional capacity of the works for voids, whereas in the breakwater estimates I have made no such allowance, on the assumption that the waste, which is sure to occur in work carried on by the medium of barges, will oblige the provision of material equal in bulk to the solid section, as per accompanying drawing.

In conclusion, I have to point out an advantage arising from a harbour of refuge in Tees Bay, which appears to have escaped the attention of the gentlemen connected with the mercantile marine who have given evidence on the subject of refuge harbours, viz., that during a time of war their ships will fear to make for the usual bold offing on quitting their ports, in order to weather Flamborough Head, because in doing so they will be liable to be laid hold of by an enemy's war steamer, which may steal over in thick weather, and they will therefore be glad to be able to safely hug the coast, as they are now obliged to do when running home lightly ballasted, and are afraid of being blown off the coast by westerly gales.

Having in this address given fully my views why I think it desirable that the principal harbour of refuge on the north-east coast should be placed on Tees Bay, I am also free to admit the great value to the coasting trade of a harbour of resort to loaded colliers which are unable to weather Flamborough Head, and also of any improvement of the Tyne which, during south-easterly gales, would render it unnecessary for ships which had passed Tees Bay being obliged to bear away for Leith Roads.

I have, &c.,
W. A. Brooks.

Newcastle-upon-Tyne,
Nov. 22, 1858.

APPENDIX, No. 36.

To the Royal Commissioners surveying the coasts of Great Britain and Ireland for the Erection of Harbours of Refuge.

The Petition of the Shipowners, Mariners, Fishermen, and Inhabitants of the Town of Robin Hood's Bay, in the North Riding of the County of York,

States,—

That the town of Robin Hood's Bay, together with the adjoining hamlets, contain upwards of two thousand inhabitants, chiefly engaged in the shipping and fishing business, possessing one hundred and twenty sailing vessels engaged in the coasting and foreign trade, besides fishing craft.

That the said bay is formed by bold north and south cheeks, extending far into the sea.

That the said north and south cheeks are chiefly and mainly composed of materials suitable for the erection of piers or breakwaters, to wit,—freestone of large dimensions, and hard and imperishable scar stones adjoining the sea beach, which materials would require no inland carriage.

Amongst other materials suitable for erecting hydraulic works on the cliffs of Robin Hood's Bay, there are inexhaustible supplies of—

"Cement stone,"
"Lias limestone,"
"Doggers and ironstone."

That the rocks or scarrs at the said north and south cheeks are dry at low water to a considerable distance, and afford a great depth of water, and good anchorage between the same; and that at the most eligible parts or places for building breakwaters there is at least *nine fathoms* of water at low water.

And that, within the said breakwaters, there will be from eight to five fathoms of water, and good anchorage for two miles in length and one in breadth at the said depths; and, lastly, that the said bay is easy of ingress and egress.

That Robin Hood's Bay is unprotected from the north and east winds, and is surrounded by the most dangerous rocky cliffs and beaches existing on the east coast, and that the loss to life and property in this locality have been immense.

That the town of Robin Hood's Bay was, within a few years, one of the largest fishing towns on the east coast; the fishing business, however, from the want of breakwaters or piers has of late decreased.

The inhabitants of Robin Hood's Bay do not presume to offer any further details or plans for the consideration of the Royal Commissioners, but beg most respectfully to draw the attention of the said Royal Commissioners to the advantages of this locality.

It was proposed at a meeting of shipowners of Robin Hood's Bay Town, by Mr. John Storm, shipowner, and seconded by Mr. James Skerry, shipowner, that G. J. W. Farsyde, Esq., of Fylongdales, be requested to present this Petition to the said Royal Commissioners.

(31 signatures.)

APPENDIX, No. 37.

Memorial to the Royal Commissioners for Harbours of Refuge, respecting Runswick Bay.

Mr. Chairman and Gentlemen,

The following are the Claims of Runswick Bay as a harbour of refuge:—

First.—The great advantages offered by nature, which could not be similarly constructed by art for less than ten to fifteen millions sterling; also its natural conformation as a harbour.

Secondly.—The immense quantity of freestone, of the most durable character, which is close at hand, at the end of each breakwater.

Thirdly.—That the breakwaters could be constructed in a comparatively short space of time, and almost giving instant security to shipping, and thus saving life and property without much delay.

Fourthly.—That the comparatively small amount of money which would be required would be insignificant, contrasted with the lives and property that would be saved.

Fifthly.—That it would greatly increase the number of fishermen, and thus form a nursery for seamen, consequently be a great benefit to the nation.

George Merryweather, M.D.,
Hon. Secretary to the
Provident Fishermen's Society
of Runswick and Staithes.

Whitby,
October 23, 1858.

To the Royal Commissioners for Harbours of Refuge.

Hinderwell, near Whitby,
Oct. 30th, 1858.

Mr. Chairman and Gentlemen,

When under examination before you, at Whitby, on the 23d instant, as to the fitness of Runswick Bay for a harbour of refuge, and being requested by your worthy Chairman to state my reasons, in writing, I now take the liberty to do so.

I have been well acquainted with Runswick Bay for above sixty years, and in early life, when in the coasting trade, frequently in the practice of calling there. I have commanded ships in the coal, Baltic, and foreign trades above twenty years, and since I left the sea I have resided within a mile of Runswick, and have had the opportunity of seeing the state of the bay in all weathers, and I consider it the best place on the north-east coast for constructing a naval station, or ample harbour of refuge for both laden and light ships. I never heard, nor do I believe, there is any rocky ground in the way of the anchorage, which is very good holding ground. I never knew an anchor to start or come home. I have seen vessels ride very heavy in the bay. This place, being nearly midway between Flambro' Head and the coal lading ports, is well situated for an harbour of refuge; would be easy of access without any pilot, by day or night; and at all times of the tide ships in distress or without anchors might run on the beach, which is quite level, and lay better than in any dry harbour I know of. If moorings were laid down a very great number of ships might be safely moored, more than would ever be likely to seek shelter at one time. There is a strong spring of excellent fresh water running into the bay, sufficient to supply the whole navy, which may be run into boats by hose.

Free stone, of good quality, abounds on both sides of the bay. The construction of the breakwaters may be carried on at the same time from the land at each side of the bay, tens of thousands of tons of this stone lying loose on the scars, on both sides, in blocks of from one to five tons, requiring no quarrying. The cliffs on both sides contain freestone at an average depth of 20 feet, with, in many parts, little or no surface soil above it. The entrance on the plan between the breakwater being north-east and south-west, ships would sail in free with the wind from north-west to south-west, and they would sail out free with the wind from north-east to south-west.

If it was thought necessary to leave a passage between the land and the northern breakwater, this could be done.

There is now a swatchway or gully inside Lingray Knock, on the extreme north of the plan, two feet water at low spring ebb; the scar here might be blown up to make more water; at high water neap tides there is now about 13 feet in this passage. There is no tide now in the bay; ships lay windrode, and there is no danger here of the harbour ever warping or silting up.

Ten or twelve sail of the heaviest ships of the line might moor under the eastern breakwater and swing, allowing an area of ten acres for each ship, besides numerous other ships of smaller class.

Remark was made on the inequality of soundings in Kettleness Hole, Mr. Boulby the surveyor, having called it Lobster Hole; from being so called it was inferred it must be rocky in that place; the bottom here is soft mud, and abounds with flat fish; at the season lobsters resort here to spawn. It is the first time I have heard it called Lobster Hole.

I am the Honorary Agent for this branch of the Shipwrecked Fishermen and Mariners' Royal Benevolent Society, and during the time I have so acted, many cases of great distress have come before me from shipwreck and loss of life, more particulary amongst the fishermen. Those men fish in the winter months in small boats called cobles, and accidents frequently occur in landing on the beach. For about nine months in the year they fish in larger vessels, luggers and yawls, of from 35 to 45 tons register; the greatest loss has been amongst those craft having no place of shelter near home. In the herring fishing season here is frequently in sight from 150 to 200 sail of those vessels, from Penzance, St. Ives, and other ports in the English Channel, Lowestoft, Yarmouth, &c., exposed to gales from north to south-east; those vessels draw more water than many light colliers, and in taking shallow water ports in a heavy sea, are not so easy managed as square-rigged vessels.

I have had losses for the want of a refuge harbour on this coast. I had a vessel which carried away the foremast off Flambro' Head, in a squall; she bore up for Whitby for advice how to act; the tides were bad; there was not water into Whitby or any of the northern ports, she was drawing 15½ feet; we hired a steam-boat to tow her to Scarbro'; she there took the ground outside the pier, as we expected; we thought the ground there level, that she could be lightened to enter on the ebbing of the tide; she lay so uneven, and so much down by the stern, she broke herself very badly. I had another vessel sunk in the basin of West Hartlepool, in consequence of the crowded state of the place, with a strong sea, and ships entering damaging each other; and on the 4th January, 1857, I lost a ship and all hands drowned, near Runswick; had there been a harbour between High Whitby and Huntcliff, with sufficient water to enter at any time of tide, those and many other wrecks within my remembrance would not have happened.

I should not apprehend much danger on this coast with the wind at south-east with a good ship, she could always get an offing, and the wind from this quarter is not generally of long continuance; we have in winter much rain or sleet with the wind from south to south-east, and after the showers the wind gets more to the west, but if the wind backs to the eastward preparation should be made for a heavy gale from the east to north-east.

I am, &c.,
Robt. Porritt.

Witness to Signature,
George Merryweather, M.D., Whitby.

APPENDIX, No. 38.

A **Memorial**, signed by 390 Masters and 28 Mates of Vessels employed in the Baltic, Coal, and Coasting Trades, praying Her Majesty's Commissioners on Harbours of Refuge will investigate the **Claims of Whitby Bay** as a Harbour of Refuge, and stating their Opinion as to the great Utility of the proposed Breakwater as a shelter from violent Gales of Wind from the South-east to East-by-North.

Signed by Captains belonging to the ports of—

Whitby,
London,
Scarbro',
Warkworth,
Shields,
Hartlepool,
Middlesbro',
Stockton,
Goole,
Exeter,
Yarmouth,
Colchester,
Seaham,
Boston,
Dundee,
Hull,
Port Madoc,
Perth,
Wisbeach,
Whitstable,
Aberdeen,
Teignmouth,
Sunderland,
Dartmouth,
Ipswich,
Southampton,

And several other ports.

We, the undersigned, being Masters and Mates of Vessels in the Baltic, Coal, and Coasting Trades, are well acquainted with Whitby Roads, and many of us have frequently ridden there, with heavy gales of wind from the south and south-east, and are of opinion that if a breakwater were carried out on Whitby Rock to the Rock Buoy it would form an excellent harbour of refuge for a great number of vessels to ride in with safety, with the wind from south-east to east or east-by-north, and would be the most suitable situation for such a harbour of any between the Humber and the Tyne.

(418 signatures.)

APPENDIX, No. 39.

Abstract of the **Receipts** and **Payments** of **Whitby Piers** and **Harbour**, from January 1857 to January 1858.

Dr.

	£	s.	d.
To workmen's wages, including cost of removing soil from the harbour (14,314 tons, at 9*s.*=536*l.* 15*s.* 6*d.*) - - -	2,025	0	10
— officers' salaries - - -	468	0	0
— smith and ironfounders' bills - -	58	15	0
— tradesmen's bills, including materials for work at piers, stone, wood, &c. - -	411	12	0
— rates and taxes - - - -	69	5	11
— rents - - - - - -	10	0	0
— solicitors' bills - - - - -	189	9	6
— postage - - - - -	0	9	6
— interest on debt - - -	1,441	8	0
— balance due by Treasurer - - -	2,026	0	2
	£6,700	0	11

Cr.

	£	s.	d.
By balance at commencement of the year -	1,467	15	6
— net amount of duties on coals at Sunderland	1,774	0	8
— ditto ditto at Newcastle	2,883	14	2
— ditto ditto at N. Shields	82	16	0
— ditto ditto at S. Shields	25	18	11
— ditto ditto at Blyth -	169	18	2
— ditto ditto at Amble -	54	16	7
— ditto upon laden vessels at Whitby -	177	0	11
— ditto light - - -	59	16	0
— sale of old rope - - -	4	4	0
	£6,700	0	11

Christopher Richardson,
Chairman.

Pier House,
January 22, 1858.

I, Peter George Coble, Clerk to the Trustees of the Piers and Harbours of Whitby, do hereby solemnly declare, that the document hereto annexed, entitled "Abstract of the "Receipts and Payments of Whitby Piers and Harbour, "from January 1857 to January 1858," is a true and correct account of the actual receipts and payments for the said period; and I make this solemn declaration by virtue of an Act passed in the 5th and 6th years of the reign of King William the 4th, cap. 62., intituled "An Act for the more "effectual abolition of oaths and affirmations taken and "made in various departments of the State, and to sub- "stitute declarations in lieu thereof, and for the more "entire suppression of voluntary and extra-judicial oaths "and affidavits."

Peter George Coble.

Declared before me, this 3d day of
November 1858.

John Chapman,
Justice of the Peace.

APPENDIX, No. 40.

To the Honourable Her Majesty's Commissioners on Harbours of Refuge.

The Memorial of the undersigned Fishermen, inhabitants of the town of Filey, on the east coast of England,

Humbly showeth—

That your memorialists have learnt with pleasure that Her Majesty's Commissioners are now hearing evidence and obtaining information to determine the best site for the construction of a harbour of refuge on this coast.

That your memorialists form part of a body of fishermen, numbering about seven thousand, who are, during the whole of the year, exposed to the dangers of the north-east coast, which body annually sustains a very considerable loss of life and property; and that your memorialists are otherwise very much impeded in pursuing their occupation owing to the want of a refuge harbour on the said coast, to which they could, when necessary, seek refuge from the sudden and destructive storms which so frequently occur.

That your memorialists, several of whom have spent 30, 40, or 50 years in the east-coast fishery, desire to state to your Honourable Commission their conviction that a harbour of refuge at Filey Bay would be the means of preventing the great loss of lives and property of fishermen already mentioned, and would moreover add great enterprise to the prosecution, and largely increase the productiveness of the fishery on this coast, which, even under its present dangers and disadvantages, yields an annual produce to the country of food to the estimated amount of nearly 1,000,000*l.*

That your memorialists further desire to state to the Honourable Commissioners their conviction, founded on their knowledge of the commerce of this coast, and especially on the circumstance of their constantly meeting large numbers of vessels delayed and endangered in its immediate vicinity, that Filey Bay is the point where a refuge harbour would be most advantageously situated to vessels employed in the trade of the east coast.

That your memorialists would also point out that Filey Bay has every local natural advantage, and no corresponding disadvantage for the construction of such a harbour.

Your memorialists therefore pray the Honourable Commissioners to admit a deputation of their number to give evidence on the subject of your inquiry.

(104 Signatures here follow.)

APPENDIX, No. 41.

REPORT of the SUB-COMMITTEE appointed 7th October 1858, by the GENERAL COMMITTEE of the LIVERPOOL UNDERWRITERS' ASSOCIATION to receive and consider the Information collecting in regard to Casualties in St. George's Channel, for Transmission to her Majesty's Commissioners for Harbours of Refuge.

THE records of this association, which relate in the main to shipping connected directly with this port, do not, on careful examination over a period of twelve months, afford sufficient information of the nature required by the Harbours of Refuge Commission.

The casualties recorded here only amount to 150,—obviously a very small proportion of those that occur in this channel to which the inquiry has been confined. The above number comprises many cases of damage, almost too trivial for special comment, as also many which can hardly be said to bear upon the point on which information is sought for.

The object proposed may be, in a measure, met by some general remarks, which even the present imperfect return calls forth.

The monthly return of all casualties in every quarter of the world, published in Mitchell's Shipping Gazette, and the daily published lists containing masters' depositions, appear to your sub-committee to supply much information, though of course they fail to convey, in the great majority of cases, the actual cause of the accident; nor, indeed, would it be easy to supply the deficiency in this respect.

Of the 150 cases above alluded to, two thirds affect the coasting trade, 16 result from collisions, (10 of which are between steamers and sailing ships); one ship only is especially noted as too deep, and the remainder comprises many vessels bound to other ports in the St. George's Channel.

The number of foreign-going ships, whether inward or outward, is, as affecting this port, very small.

In considering the above results with regard to the coasting trade, your sub-committee consider that the casualties to vessels of this class, mainly arise from the fact, that they generally are heavily laden, ill-found, and poorly manned. The competition of steamers to various outports, and the great facilities afforded by railways for conveying goods and produce to and from those places which were formerly the monopoly of the coasting trade, have, in no small degree contributed to impoverish it, and the natural consequence is that the ships are not kept up, and added to this are the dangers of a coasting voyage, especially in our winter months, and the inducement which a short trip often affords for overloading the vessel.

Collision is now a most fruitful source of calamity, and it is unnecessary for the sub-committee to allude to this subject further than to recommend a uniform system of lights to be adopted by the marine of all countries; and further, as regards steamers, the regulation of their speed in narrow channels during thick weather. On the first of these heads there is reason to believe that more uniformity will henceforth prevail; as regards the latter, something has perhaps still to be done.

Use of the Lead.—This has been a frequent subject of communication between the committee and the Board of Trade, which has always evinced a laudable anxiety to enforce the use of a means which, in this channel at least, might obviate much loss of life and property.

The knowledge of the tides on this coast now forms part of the examination of masters, and it would perhaps be desirable to extend it to that of mates, as its utility cannot be questioned.

The sub-committee are glad to find that the loss of property at sea has been so prominently before Her Majesty's Government.

Hitherto the supervision of vessels as regards their loading and equipment, has been confined to such as carry passengers, with a view to the protection of life. The surveyors of this association have submitted the accompanying report on the leading features of this subject; and the sub-committee invite its further consideration.

Annexed also, is a table referring to the most important losses in this channel during the past year. The table assigns any ascertained cause of each casualty, as well as the state of the weather at the time.

It will be gathered from the above remarks that your sub-committee is at a loss how to refer the mere question of loss, as a whole, to the question of the advantage of harbours of refuge. There may be, and indeed no doubt are, many cases in which such harbours would have been most serviceable, especially to the coasting trade, since for the foreign trade vessels are more specially equipped, besides being of a superior class in themselves. It is, however, a notable fact in the above returns of this association, that out of the vast number of foreign bound ships from this port, the instance of a vessel putting in is the exception, and your sub-committee can quite bear out the statement of the chairman of the Shipowners' Association on this point. Still, had a harbour of refuge existed it may be fairly concluded that it would have been availed of in certain cases, by many even of the best ships, as a question of prudence, whilst to crippled or inefficient ships, the protection afforded is beyond doubt.

On this side of the channel, Studwell Roads, Holyhead, the Menai Straits, the Isle of Man, and the Clyde, in a great measure, supply these wants, whilst on the Irish coast, Crookhaven, Cork, Waterford, Kingstown, and Belfast Lough, can be instanced as constantly availed of for the purposes of refuge. The improvement of some of these roadsteads would probably meet all requirements, and obviate the necessity of extravagant outlay on any one or two particular points of this coast.

The system of lights in operation on either coast of this channel, appears to be suitable, and this sub-committee have only to suggest that, with a view to render Studwell Roads more generally available, another light should be placed either on Sarn Badreg or midway between Bardsey and the Bishops.

In conclusion, your sub-committee would remark, that no legislation, no precautions, whether of lights regulations or harbours of refuge, will avail so long as recklessness, drunkenness, or inefficiency of officers or crew, inattention to equipment, stowage, and loading, and omission of the use of the ample appliances for safe navigation, form such a prominent feature in many of the casualties that yearly occur on these coasts.

(A true copy.)

Liverpool, Nov. 1858. THOS. COURT,
Underwriters' Rooms. Secretary.

Date of Casualty.	Vessels' Names.	Where from.	Where to.	Locality of Casualty.	Wind and Weather.	Remarks.
1857. Sept. 14	Fusilier	Caldera	Liverpool	St. Gowan's Head, Bristol Channel	S.S.W. q. S. 7 c.	Total wreck, having mistaken his position. Too little caution evinced.
„ 26	Annan and Whitehaven Trader.	- - -	- -	Off Walney Island	- - -	Run down by Queen (s.); mate and wife drowned; crew saved in their boat. Was afterwards taken into Fleetwood a derelict.
Oct. 5	Splendid	Ardrossan	- -	Bernard's Wharf	Fine.	Wreck.
„ 19	Sir J. Beresford	Ditto	Genoa	Fifty miles S.S.E. of Cork	- - -	Foundered. An old ship (see deposition).
„ 22	Schooner Fairy	- - -	Eastward	Eastward of Lamlash	E. 9 m. 8 g.	Run down by Corsair (s.); one boy drowned.
„ 24	Earl of Errol	Newcastle	Dublin	St. Ann's Head	E.N.E.	Run on shore, having sprung a leak at sea.
„ 19	Sir C. Napier	Liverpool	Sierra Leone	Kish Bank	E.N.E. 4 g.	Struck, and became a total wreck; crew saved.
„ 22	Europe	Callao	Queenstown	Causeway, Cardigan Bay	N.E. 8 b.	Overrun her port in a gale; got off with 5 feet water in her hold, and came to Liverpool.
Dec. 3	Schooner Thomas	Carnarvon	Dublin	Cleopatra Rock, of Holyhead	S.W. 9 p.	Struck, and immediately disappeared with all hands.
„ 12	Atalanta	Liverpool	Buenos Ayres	Off Skerries	S.S.W. to S.E. 3 b.	Run down and sunk by Times (s.s.), which was held liable and was sold.
„ 20	Earl of Carrick (s.)	Ayr	Liverpool	Off Marby Point, Isle of Man.	Thick heavy weather.	Ran on a reef of rocks; became a total wreck; only two lives saved.
„ 23	Prince Arthur	Liverpool	- - -	- - - - -	Heavy and squally.	Put back, was thrown on beam ends and cargo shifted, 18th December below Bardsey.
1858. Jan. 2	Sophia (Prussian brig).	Troon	Smyrna	Blackwater Bank	S.S.W. 6 b. 8 „	Crew saved.
„ 5	France et Brasil	Liverpool	Rio Janeiro	Kish Bank	S.S.E. 3 b.	Ditto.
„ 9	Albert	Ditto	Monte Video	Cardigan Bay	W.S.W. 9 b.	Ditto.
„ 14	Resolution	Ditto	Pernambuco	Stranraer	- - -	Sailed 26th December; put in with topsides strained and boat stove, having experienced heavy weather.
„ 14	Majestas	Liverpool	Rio Janeiro	Off Point Lynas	- -	Was in contact when Jeans sunk. Majestas was abandoned, but Majestas was subsequently brought to Liverpool a derelict.
„ 14	Jeans	Ayr	Runcorn	Ditto	- -	
„ 18	Earl of Surrey	Arklow	Liverpool	Off the Mersey	N.W. 4 p.	Struck on Taylor's Bank and sank; crew saved.
„ 20	Mary Johannah	Barrow	Port Talbot	Dutchman's Bank	N.W. 10 q.	One man drowned.
„ 22	Ellerslie	Liverpool	Barbadoes	Wexford	N.W. 4 b.	Sailed 17th January; drove high up on the shore of the South Bay, was discharged, repaired, and proceeded to her destination.
„ 23	Success	Arklow	Belfast	Donaghadee	S.W. 5 b.	Sunk in the harbour.
„ 23	Splendid	Dundalk	Portaferry	Ballycormick Point	S.W. 5 b.	Crew saved.
„ 23	Crimean	Whitehaven	Liverpool	Off Lytham	S.W. 5 b.	Ditto.
„ 27	Loire (s.s.)	Liverpool	London	East Hoyle	S.S.W. 4 g.	Ran on shore at night and broke up; crew and passengers saved.
Feb. 2	Rosina Claypole	Liverpool	Jamaica	West Hoyle	31st N.W. 5 b. 1 Feb. N.N.W. 10 b.	Assisted off by Rhyl life boat and brought back to Liverpool; was putting back.
„ 6	Friendship	Ardrossan	Liverpool	Off Duddon	S.W. S.S.W. 10 b.	Foundered.
„ 11	Cheval du Troie	Nantes	Newry	Bray Beech, Isle of Man	E.S.E. 4 g.	Ashore, with loss of main and mizen masts.
„ 26	Etoile du Matin	Nantes	Liverpool	Cloughy Bay	E. 9 b.	Subsequently got off and taken to Belfast.
„ 27	Avondale	Liverpool	New York	Arklow Bank	E. 9 b.	Crew saved.
„ 28	Bahia Packet	- -	- -	Near Baldoyle	E. ½ b.	
March 6	Hesperus	Liverpool	Boston	Beaumaris Bay	N.E. b.	Towed in dismasted.
„ 10	Thekla del Carmen	Bristol	Liverpool	Cardigan Bay	W.N.W. 8 b.	Drifted on shore near Aberystwith and went to pieces; crew saved.
„ 15	Defence	Corisco	Liverpool	Off Boscastle	- - -	Struck on a rock near Milford, became unmanageable, and drifted to where she was wrecked; crew saved.
„ 16	City of Pekin	Clyde	India	In the Clyde	W.N.W. 4 g.	Thick weather; was on shore leaving the Clyde; put into Milford leaky; leak discovered and stopped.
„ 28	Albion	Maryport	Belfast	- - - - -	- - -	Run down off Mull of Galloway.
„ 30	Egidia	Liverpool	Trieste	Glasgorman Bank	S. W. 4 g.	Taken into Kingstown.
April 6	Exchange	Liverpool	Newport	Wicklow Head	E.S.E. 9 q.	American ship, going to load iron for Savannah; crew saved.
„ 6	Arctic	Figuera	Liverpool	Arklow Bank	E.S.E. 9q.	Crew saved.
„ 7	Mary Stoddart	Alexandria	Clyde	Dundalk	S. 9 p.	Driven on shore.
	War Cloud	Calcutta	Liverpool	Dundrum Bay	Heavy gale.	Anchored and cut away main and mizen masts; was afterwards towed from Dundrum Bay to Liverpool.
	Weser	New Orleans	Liverpool	Howth	Heavy gale.	While being towed out from a dangerous anchorage off Malahide the hawser parted, and she went on shore at Howth; crew and cargo saved; ship a wreck.
	Triton	Liverpool	Barcelona	Kilkeel	„	Totally wrecked on the rock; three men drowned.
	Sylvia	Liverpool	Newfoundland	Dundrum Bay	„	A complete wreck; crew drowned.
„ 8	Bridges	Dunkirk	Liverpool	Near Skerries, co. Dublin	- - -	Total wreck.
„ 8	Pearl	Liverpool	Cork	Glascarig Point.		
„ 11	Jno. Duncan	Savannah	Liverpool	Dundrum Bay	- - -	Towed in from Dundrum; had been in same gale as above vessels.
„ 14	Jeune St. Charles	Portreux	Londonderry	Calf of Man	S.S.W. 9 d.	Lost on Calf during the late gales.
„ 14	Neptune	Llanelly	Amlwich	Off South Stack		Abandoned, dismasted.
„ 30	Brigand (s.)	Bristol	Swansea	St. George's Channel	W. 4 p.s	Were in contact, and both sank; 19 persons saved from the two vessels; several lives lost.
	Wm. Campbell	Clyde	Demerara			
May 1	Robt. Hastie	Liverpool	Halifax	Loch Ryan	- - -	Put into the Lock (a harbour of refuge), and struck taking the anchorage.
„ 22	Edw. Oliver	New Orleans	Liverpool	Holy Island	S.W. 9 q.	Was subsequently lightened, and towed to Liverpool, with comparatively little damage.
June 4	Amazon	Liverpool	Para	Arklow Bank	S.W. 5 b.	All her goods were got out, and vessel was dismantled. (Want of care.)
„ 10	Cahuzac	New York	Clyde	Mackrianesh Bay	N.N.E. 0 b.	Cargo and materials saved.
„ 12	New York (s.s.)	Clyde	New York	Mull of Cantyre	W.S.W. 3 b.	Total wreck; no lives lost.
„ 21	Australia	Liverpool	- -	Milford	- -	Put in with cargo (patent fuel), ignited, and was scuttled.
July 17	Venus	Liverpool	Cork	Off Cork	S.E. 6 b.	Sunk, after collision with the "Centurion," from New York to Liverpool, which saved all the crew but one; very conflicting evidence.
Aug. 31	Anglesea and Hoang Ho.	- - -	- - -	Off the Smalls	N.W. 5 p.	In contact.
Sept. 3	Harriet Frances	Liverpool	Baltimore	Arklow Bank	S.W. 8 r.	Total wreck; crew saved.

APPENDIX, No. 42.

Report of the **Surveyors** of the **Liverpool Underwriters' Association** on the Difficulties of preventing Ships being overloaded.

In compliance with the request of the sub-committee on casualties is St. George's Channel, that your surveyors would give their opinion as to the difficulties in the way of preventing vessels being loaded too deep, your surveyors have to report that the chief obstacle arises from the diversity of opinion, there being no known law to limit or define the proper loading marks of any vessel, nor can your surveyors lay down any rule that would be applicable to all vessels, from the great variety of model, the difference in the strength and weight, and in the quality of building materials, also from the great difference in the weight and description of cargoes.

It therefore follows that nothing less than good practical judgment can say when a vessel is prudently laden; and so long as there is no defined law, or tribunal established to decide such cases, there is always plenty of evidence to be obtained at variance with your surveyors' opinions, from that general diversity remarked upon above.

It may be well to state that there is a kind of rule used as a sort of a guide to assist in arriving at a decision when a dispute arises as to draught of water, which is that of having three inches of dry side in the midship section to every foot depth of hold, from the level of the upper part of main deck, but it is so erroneous that we cannot recommend it as a general rule.

(Signed) W. **Alexander**,
J. F. **Bisset**,
W. C. **Mitchell**,
J. **Jordan**.
Surveyors for the Liverpool
Underwriters' Association.

Report of **Surveyors** on the loading of Articles liable to injure others; and on the licensing of Stevedores.

In conformity with the further request of the sub-committee on casualties in St. George's Channel, your surveyors offer their opinions on the following points submitted to their consideration:—

1. On the improper distribution of dead weight, as cargo, in a vessel's hold.
2. On articles injured by contact.
3. On articles that evolve vapour when wet, or otherwise, or are likely to damage other parts of the cargo, though not in contact.
4. On the licensing of stevedores.

In regard to the first point, your surveyors consider it highly improper to store heavy dead weight cargo, if the quantity be large, in one place, but recommend that all dead weight cargoes be judiciously arranged, by having a proper elongation fore and aft the hold, with a suitable portion of it well elevated in the midship section to make the vessel easy at sea; and when very heavy machinery forms part of the cargo, great care should be taken in stowing it, to prevent its breaking or injuring other portions of the cargo while being placed in the hold, and then the pieces should be well chocked, and secured against moving in their berths.

2. In the second place, it is always presumed that cargoes are shipped in good order, and ought to be so stowed that neither tar, oil, nor other liquids would be in contact with dry or damageable goods; nor should any iron or other hard substance be put close to bale goods, for fear of chafing or injuring them; nor should soft damp sugar in bags be put near fine dry sugar, or other similar articles that are liable to be discoloured by contact from attraction.

3. In the third place, articles of merchandise likely to evolve or emit vapour or steam are numerous, viz., corn, all kinds of seeds, tobacco, cotton, wool, and nearly all descriptions of vegetable matter; also some minerals, such as copper or other ores, which are liable to heat; and some volatile articles, such as naphtha, spirits of turpentine, and most acids, which are liable to taint and injure other articles, and are really dangerous in the hold of a vessel from the liability of combustion.

4. And lastly, in regard to the licensing of stevedores for the stowage of cargoes, your surveyors are of opinion that it is very desirable, and that it would be a great check to bad stowage and the improper distribution of cargo, and recommend that they be strictly examined as to capability by a competent board, and well looked after by an experienced superintendent, controlled by said board.

(Signed) W. **Alexander**,
J. F. **Bisset**,
W. C. **Mitchell**,
J. **Jordan**.
Surveyors for the Liverpool
Underwriters' Association.

APPENDIX, No. 43.

Portland Harbour of Refuge.

21st February 1859.

Statement showing the cost per foot lineal of Rubble Breakwater.

Amount shown in Quarterly Statement at 31st March 1855, viz.:—

Contract Works Account - - - -	£354,680
Land and General Expenditure Account -	101,074
Total - - - -	455,754

At 31st March 1855 there had been expended upon purchase of upwards of 530 acres of land for works of defence, foreshore of harbour, land for quarries, and general purposes, for stage across passage, and upon heads to passage, and the "Returns" to same, forming junction with general superstructure - - -	137,082
Expended to same date on account of rough rubble stone deposits - - -	318,672
Total as above - -	455,754

Of the sum of 318,672*l.* above stated the amount of 246,877*l.* was applicable to the quantity of rough stone deposits *actually* in the breakwater at 31st March 1855, including the cost of staging, except that across the passage; the remainder (71,795*l.*, being the due proportion of the cost of the inclined planes and machinery, and the railways connecting the inclines with the breakwater and quarries, and of fixed plant and apparatus), must be distributed rateably over the rubble deposits then remaining to be executed.

The length executed at 31st March 1855 being - - - - - -	3,860 feet.
Less passage 400 feet + heads and returns 300 feet - - -	700 „
Net length of rubble breakwater -	3,160 „

Then £246,877 ÷ 3,160 = £78 per foot lineal.

This statement is made up from the contract and general expenditure account, as kept by me at Portland since 1850.

Alexander Sanderson,
Engineer's Assistant and Accountant
Portland Breakwater Works.

Note.—The cost per foot lineal of rubble breakwater made up to the 31st March 1858 in the same manner as above, amounts to 84*l.* 12*s.* per foot lineal; the difference between the cost at March 1855 and March 1858 being due to the circumstance of the work having passed over the greatest depth of water in the interim.

The cost of the superstructure of the inner breakwater will be about 30*l.* per lineal foot when completed.

A.S.

APPENDIX, No. 44.

The Opinions and Views of **Ralph Milbanke Hudson**, of the Borough of Sunderland, Shipowner, with reference to the Imposition of Tolls for Payment of Harbours of Refuge, submitted, at their request, to the Harbours of Refuge Commission.

Sunderland, 1st December 1858.

In the published evidence taken before the Committee of the House of Commons on Harbours of Refuge, I find that Captain Sulivan, one of your Commission, gave it as his opinion that the shipowners, as a body, would not object to a passing toll for the support of harbours of refuge; and on the same occasion, he further gave it as his opinion, with special reference to this coast, that the amount of such toll should be one penny per ton each time of passing.

On reference to the report of the same Committee, I find that, in admitting the principle that a large portion of the outlay should be contributed from the public exchequer, yet, apparently influenced by the expressed opinion of so important a public functionary, they recommend the imposition of such description of tolls.

Now, whilst at once asserting, without fear of contradiction, that the views of the shipping interest on this coast are most directly opposed to the imposition of any passing toll whatever, I propose to show that a toll at such rate would realize upwards of three times the value of the property which such harbours might be calculated annually to save.

From the published statistics I find that, in even numbers, the vessels annually arriving at and departing from the ports between Berwick and Scarborough, both inclusive, are as follows:—

		Average Tonnage.	Tons.
Vessels laden, in and out	60,000	140	8,400,000
Do. in ballast, inward	45,000	140	6,300,000
Total	105,000		14,700,000

In the immediate neighbourhood of the coast, between the same limits, the wreck report for 1857 gives the loss and damage from all causes as follows:—

Vessels totally lost	75
„ damaged	99
	174

or about 1 in 600.

The same authority in tables 10 and 11 gives the causes of the loss and damage for the whole coasts of the United Kingdom, from which I learn that those which might be prevented by harbours of refuge amount to 251.

Assuming an average may be taken (and excluding from such average all the cases of collision), it follows that the loss and damage arising from the same causes between the afore-named limits, amount to 43·7 vessels.

Now assuming that by harbours of refuge 50 per cent. of such loss might be avoided, it then follows, that between these limits, taking each case, whether of loss or damage, at 1,000*l.* (a large estimate), the saving of property could not exceed 22,000*l.*, and if from this, a proportionate amount be deducted for loss to foreign vessels, say, according to the same authority, 20 per cent. the annual saving to the nation would not amount to more than 18,000*l.*, whilst the toll of 1*d.* per ton would produce on the above tonnage 61,250*l.*

In the report of the same Committee it was urged that because ships were required to pay passing tolls for the various lights on the coast, that with equal justice they should be called on to pay, by like toll, for harbours of refuge.

Now, admitting for argument that it is equitable so to charge ships for lighthouses, then I say the cases are not analogous, as, whilst no ship can pass along the coast without requiring aid from, and enjoying the use of the various lights, it would only be occasional the benefit to be derived from such harbours.

My objection, however, to passing tolls takes a wider scope, as on the broad principle, that, in accordance with the free trade progress of the age, it is the duty of the country to give every aid to commerce, and facility to trade, and also as such burdens are not capable of being equally imposed, I contend it is right out of the public exchequer to defray the cost, both of lighthouses, and harbours of refuge.

This principle is admitted as to lights, and carried out by the Governments of the United States, France, Prussia, and various other foreign powers.

If the shipowner navigated his vessel as an amusement then there might possibly be some show of justice in taxing him in the shape of light duties, or refuge passing tolls on what might be called luxuries, but when I find that, not only the yacht owners who do sail their vessels for amusement, but also the vessels of the crown are all equally exempted from payment of such duties, then I say it is manifestly unjust; and I protest against the shipowner being made the medium of such payment.

Were these views dissented from by your Commission, then I object to the imposition on the shipowner of any passing toll of harbours of refuge on two grounds.

Firstly, because they are incapable of being fairly and equally imposed; and secondly, I contend it is the duty of the country to pay for the saving of life as well as for providing for the safety of the Queen's ships—the two objects for which they are more immediately proposed to be constructed.

With reference to the first, I find, by the wreck chart for 1857, that five per centum of the vessels lost and damaged were foreign vessels not trading to this country, and to which may be added a further per centage for British vessels trading to or from continental ports to distant foreign ports, on neither of whom could any passing toll be imposed or received.

Adverting to my second objection, I may observe that, if the principle were insisted on that shipowners should contribute relatively with the other interests intended to be protected, then I say, finding the loss of life to number nearly 1,000 per annum (a much larger relative part of whom would be saved by such harbours), that if the country were to pay a fair proportion for them as well as for the Queen's ships, and also for those other vessels before-named on whom such toll could not be imposed; and further, if gentlemen's yachts and the various fishing and other small craft were to contribute, it would require a very small payment to be made by the mercantile shipping, and such as could be contributed by a very moderate anchorage due.

In using the statistics, I have applied them to the locality in which I reside, and with which I am more particularly acquainted; my opinions, are, however, intended to apply equally to the question generally, and the shipping of the whole kingdom.

R. M. Hudson.

Signed before me this 4th December, 1858,
(Signed) John Candlish, Mayor.

APPENDIX, No. 45.

Office of Public Works, Dublin,
6th April, 1859.

Sir,

Harbours of Refuge Commission.
Waterford Bar.

Having brought the examination of the Waterford Bar, made by order of the Commissioners, to a close, I beg to forward herewith the journal of the superintendent, Mr. James Campbell's proceedings while making the borings, and an enlarged tracing of the chart showing the position and the depth below the surface of the bottom of each boring. Applying to these the depths shown on the Admiralty chart at each place, it will be seen that in every instance more than the depth specified in the Commissioners' instructions, namely, 24 feet at low water, has been attained, and with no difficulty.

The closest examination of the bottom, by sounding with an iron-shod pole over the area of the bar, did not discover a trace of rock anywhere, or of boulders that would in the slightest degree interfere with the working of a dredge, the surface being mostly a fine gravel scattered thinly over a silty sand, and sand and shell slightly mixed with clay.

The result of these borings, and of my own personal observations, is, that I have no hesitation in stating to the Commissioners my conviction, that no obstruction exists to the formation of a channel of the depth and width proposed by the ordinary steam dredge, and I have little apprehension that there would be any serious tendency to the re-formation of the bar, the tidal action would be so directly through the channel.

The soundings on the Admiralty chart are so accurate, that they may be safely taken as data for determining the quantity to be removed to form such channel as the Commissioners should determine upon.

I have &c.,
B. D. Gibbons.

P.S.—I have the specimens of the material taken up in the borings, and shall forward them if ever required.

[Note.—*The journal containing the particulars of the boring operations at Waterford, together with the plan, have been deposited in the Harbour Department of the Admiralty.*]

APPENDIX, No. 46.

Public Works Office, Dublin,
7th April, 1859.

Sir,

Refuge Harbour Commission.
Carlingford Bar.

I forward herewith Mr. Hoskyn's journal of borings made since my former return, and the details of the diver's examination; and also his plan of the bar, &c., on which the position of the borings is given, and sections in accordance with these borings.

I have had a long and anxious conference with Mr. Hoskyn, and also the diver, and it appears to me that the examination has been carried far enough to procure all the information that is attainable by the means at our disposal, or, indeed, by anything short of actual working of the project out. The result of all is to show that where solid obstructions occur, such as would interfere with the working of the steam dredge; they consist of separate stones, of very moderate size for the most part, and not rock *in situ*.

The examination, of course, is in a great degree confined to the surface, and it is possible that underneath the layer of boulders bedded in clay, solid rock may exist, but I must say that I do not consider this probable. In Kingstown Harbour I have removed a very large number of boulders lying between low-water line and a depth of 16 feet at low water spring. Some of these weighed as much as 40 tons, and in other cases they were in patches closely packed, and of the size as described by the diver to be at Carlingford, but in no instance did we find them overlying rock *in situ*.

On the fullest consideration, I have no hesitation in stating that I consider the project of removing this bar quite feasible, at a cost far within the value of the object to the country.

I hope the Commissioners will excuse my calling their attention to the admirable manner in which Mr. Hoskyn has carried through this investigation, as may be seen by reference to his plan, sections, and report.

I assure you that it was attended with considerable difficulty, and at such a season with great personal hardship.

I have, &c.,

BARRY D. GIBBONS.

[NOTE.—*The journal containing full particulars of all the boring and diving operations at Carlingford, together with the plan on a large scale, have been deposited in the Harbour Department of the Admiralty.*]

APPENDIX, No. 47.

CATALOGUE of CHARTS, PLANS, &c. connected with the Inquiry on Harbours of Refuge, produced for the information of Her Majesty's Commissioners during their Sittings.

WICK - -	Chart ; Port and Bay of Wick, showing the proposed improvements referred to in the late Mr. Rendel's Report of May 1853.
	Plan of Wick Bay, showing improvements proposed by Captain Vetch, R.E. and Mr. E. K. Calver, R.N.
FRASERBURGH -	Plan of Fraserburgh Harbour ; showing works proposed by Mr. Abernethy, C.E. 1857.
	Plan ditto ditto, 1858.
	Plan for extension of breakwater in Fraserburgh Bay, proposed by Mr. Abernethy, C.E.
	Plan of Fraserburgh Bay and Survey thereon, by Commander Bedford, R.N.
PETERHEAD - -	Plan of Peterhead, with proposed breakwater.
	Chart, showing the tracks of vessels between Peterhead and Greenland, from 1849 to 1856, furnished by Mr. D. Gray.
	Chart, showing ten tracks made in different vessels, to, and from Peterhead, furnished by Mr. J. J. Scott.
	Diagram, showing the number of vessels passing Buchan Ness and other Lighthouses during 1850–56, furnished by Mr. D. Stevenson, C.E.
	Plan of Peterhead, surveyed by Commander Bedford, R.N., 1858.
	Plan of Peterhead Bay, showing proposed Harbour of Refuge, by Commander Bedford, R.N.
ABERDEEN - -	Plan of the basin of Montrose, and River South Esk.
	Plan ditto ditto furnished by Mr. G. Buchanan, 1824.
	Plan of Aberdeen Harbour showing proposed alterations, &c., by Mr. J. Abernethy, C.E., 1846.
	Plan of Aberdeen Harbour, with sounding taken 4th August 1858.
	Plan of Lossiemouth Harbour, showing proposed improvements, by Mr. J. Abernethy, C.E.
	Plan of Aberdeen Harbour, and design for breakwater, by Mr. J. Abernethy, C.E.
	Plans Nos. 1 and 2, Montrose Harbour, River South Esk, showing the proposed Improvements in its Channel, by Mr. James Leslie, C.E.
	Cross Sections of River South Esk at Montrose, 2 Sheets, by Mr. James Leslie, C.E.
	Cross Section No. 2, Montrose Harbour, by Mr. James Leslie, C.E.
	Longitudinal Section of River South Esk, showing proposed deepening of Channel, by Mr. James Leslie, C.E.
	Plans showing the extension of harbour of Stonehaven referred to in Mr. R. Stevenson's report of 1812.
PORTRUSH - -	Plan of the Skerries Rocks, Co. Antrim, showing the proposed Breakwater Mr. Hoskyn, R.N.
	Do. Finished Plan, with Sections inserted.
	Lithographic Plan of the proposed Breakwater and Harbour of Refuge, Portrush.

Carlingford	Carlingford Lough, Sections of the Bar. Two Plans. Plan—Carlingford Lough and Bar—Surveys of Messrs. Colby, Mudge, and Frazer. Plan—Carlingford Bar—showing relative position of the Borings. Mr. J. Ramsay, A.M., 1835.
Waterford	Plan of Waterford Harbour surveyed for Commissioners for improving the Port, appointed 1835. Copies of Charts of Waterford Harbour, by Mr. Wm. Doyle, 1735, and Messrs. Laurie and Whittle, 1794, with additions to 1808.
Douglas (Isle of Man.)	Plans—Isle of Man Harbours, viz., Peel, Douglas, and Ramsay.
St. Ives	Plan—St. Ives Bay, Messrs. Jeffreys and Faden, 1773. „ „ Mr. F. Jenkyns. A Plan for making a safe and commodious Harbour in St. Ives Bay, Messrs. F. Jenkyns and R. Trevithick. Plan—St. Ives Bay—Capt. G. Williams, 1848.
Padstow	Plan—Coast from Hartland Point to the Lizard Point, showing line of embayment with a north-west gale in conjunction with Atlantic swell. Plan for lowering Stepper Point, Padstow, with Sections. Plan—Padstow Harbour, showing proposed Improvements, by Capt. Sheringham, R.N. Plan—Proposed Platform, Padstow. Sections of Guide Walls as shown on Plan for the Improvement of Padstow Harbour.
Swansea	Plan for a Harbour of Refuge in Swansea Bay, designed by Mr. J. Abernethy, C. E. Designs for Breakwaters in Swansea Bay, by Mr. J. Abernethy, C. E.
Blyth	Plan of Blyth Estuary, with proposed Improvements.
North Shields (Tynemouth).	Plan of the Mouth of the Tyne, with proposed Improvements in Moorings, by Mr. E. K. Calver, R.N., 1838–1849. Plan of the Coquet Road, with proposed Piers and Breakwater. Chart of the Mouth of the Tyne, with proposed extension of Piers, by Mr. J. Walker, C. E.
Sunderland	Plan of the Wet Dock and Tide Basin at Sunderland, 1856. Plan of the Harbour of Sunderland, with proposed Improvement of the Entrance, Messrs. T. and D. Stevenson, C. E., 1858. Plan of, and proposed Improvements in Hendon Bay, by Mr. E. K. Calver, R.N., 1838–48. Sections of the Navigable Channel, and of the Shores on either side of the Entrance to the Harbour of Sunderland, made under direction of Mr. Meik, C.E., 1852. Plan of proposed North and South Breakwaters referred to in Mr. D. Stevenson's Evidence. Sections of proposed Breakwaters referred to in Mr. D. Stevenson's Evidence.
Hartlepool	Map—Cleveland Railway. Design for Breakwater in the Bay of Hartlepool. Sections. Chart—Tees Bay. Com. Slater, R.N., and Mr. E. K. Calver, R.N., 1838 to 1853, showing proposed Improvements. Chart—Hartlepool Bay. Com. Slater, 1838 to 1842, showing proposed Improvements. Plan—Hartlepool, containing Sections of the Shores between Low and High Water Mark in West and North-west Parts of the Bay, &c., by Mr. W. O. Mossman. Plan—Hartlepool Harbours and Bay, by Mr. W. O. Mossman, showing Scheme for converting the Bay into a Harbour of Refuge. Plan—Hartlepool Bay. Mr. W. O. Mossman, 1846–58. Chart of Coast from the Humber to St. Abb's Head, showing the Line of Embayment, by Mr. W. O. Mossman, of Hartlepool. Plan—Tees Bay, showing proposed Harbour of Refuge, by Mr. J. Fraser, C.E. Also Sections. Plan—Tees Bay, showing proposed Piers, &c., by Mr. J. Fowler. Also Sections. Chart—Bay and Entrance of River Tees and Creek of Hartlepool, by Mr. P. Thompson, corrected to 1821. Hartlepool Wreck Chart, Oct. 1846 to Dec. 1857, by Mr. W. O. Mossman. Also Plan and Sections of proposed Harbour of Refuge at Hartlepool, by Mr. J. M. Rendel, F.R.S., 1854.

HARTLEPOOL—*cont.*	Hartlepool Bay reduced from Admiralty Chart, 1838-42, with Designs for a Refuge Harbour, by the late Mr. J. M. Rendel, C.E., 1855, and by Mr. R. W. Jackson, 1858. Plan of West Hartlepool Harbour, showing Lines of Sections taken previous to its commencement in 1845. Also Sections of the State of the Harbour before, and after Dredging, 1858. Chart showing Design for Harbour of Refuge in Hartlepool Bay, by Mr. James Abernethy, C.E.
REDCAR - -	Map—Stockton, Darlington, and Cleveland Railways, 1858. Chart—Tees Bay, showing proposed Harbour of Refuge. Mr. J. Fraser, C.E., 1858. Tees Bay—Sections through Breakwater and through Pier. Mr. J. Fraser, C.E., 1858. Blans and Sections of Tees Bay, showing proposed Breakwater, by Mr. W. A. Brookes. Plan of Redcar, showing proposed Harbour of Refuge, by Mr. J. Anderson. Plan—River Tees and Tees Bay, including Redcar Rocks, by Mr. E. K. Calver, R.N., showing the site of the Harbour of Refuge proposed by Mr. J. Dunning, C.E. Sections of Harbour of Refuge proposed by Mr. J. Dunning, C.E. Chart, showing Tees Bay, the proposed Harbour, the proposed Quarries, and proposed Line of Transit, by Mr. J. Dunning, C.E. Plan of that Portion of Tees Bay extending from Redcar Rocks to the Mouth of the Tees, showing the Line of a proposed Breakwater for a Harbour of Refuge.
WHITBY - -	Plan of a proposed Harbour of Refuge at Whitby : Map of the River Esk, showing proposed improvements referred to in Mr. Walker's Report, 1845. Section of River Esk, from Ruswarp Mill to Whitby Bar. Plan of Part of Whitby Harbour, showing the Piers, 1858. Chart—Part of the Coast of Yorkshire, including Whitby Road, Mr. J. Pickernel, 1791. Plan and Sections of proposed Breakwater at Runswick Bay. Plan and Soundings of Runswick Bay, with proposed breakwaters, showing the advantages possessed by it for forming a Harbour of Refuge.
BRIDLINGTON -	Plan for a Floating Breakwater at Bridlington, by Mr. B. S. Sawden.
SKERRIES. - -	Plan—Design for a Breakwater to shelter the Roadstead at the Skerries.
MISCELLANEOUS -	Chart of the North Sea by J. W. Norie, 1818. Chart of North Sea; published by C. Wilson, 1858, with Tracks of several Vessels inserted. Chart of North Sea, by Wilson, 1858, with courses and distances inserted. Chart of North Sea, by Wilson, 1858, with the usual Tracks of Vessels inserted. Yarmouth and Lowestoft Roads. Sections of proposed Fascine Barriers for raising Sand Banks to convert Roadsteads into Harbours of Refuge. Breakwaters, &c. Design by Capt. Vetch, R.E., 1858. The Construction of Piers and Breakwaters as proposed by Mr. C. Burd, C.E. Also Captain Vetch's Report. Plan and Drawing of Harbour of Refuge, Dover, as proposed by Mr. R. W. Bennett, 1843; and Drawing showing Construction of Suspension Bridge and Piers.

Catalogue of Documents connected with the Inquiry on Harbours of Refuge, produced for the information of Her Majesty's Commissioners during their sittings.

NORTH-EAST COAST OF SCOTLAND.

Port.	No. of Document.	Nature of Documents.
Wick	1	List of casualties in and near the Pentland Firth, from 1832 to 1858.
	2	Return of wrecks in the Pentland Firth, contained in a letter from Mr. S. Davidson, Huna, to Mr. Mackie, Wick.
	3	Account of a gale at Wick, extracted from the *Northern Ensign.*
	4	Return of boat losses off Wick, between 1845 and 1858, furnished by Mr. Mackie.
	5	Letter from Joseph Hume, Esq., M.P., dated September 1854, to Mr. Mackie, respecting improvement of Wick Bay.
	6	List of boat wrecks off the Caithness Coast for 1845-58.
	8	*Northern Ensign*, weekly circular No. 7, 28th August, 1858.
	9	Return of number and tonnage of vessels passing the Wick district and paying dues, in the years 1852-53.
	10	Report and balance sheet of the British Fishery Society for 1857.
	11	Statistics of trade, casualties, &c. to prove the superiority of Peterhead over Wick, as a site for a Harbour of Refuge, furnished by Mr. J. G. T. Sinclair, Thurso.
	12	Evidence in favour of Wick, as a site for a harbour of refuge, by Mr. J. Mitchell, C. E.
	14	Printed Return of the number of vessels and their cargo passing the Sound, to, and from, America during 1853, furnished by Mr. H. T. Rainals, Elsinore.
	15	Extracts from the *Northern Ensign*, on the Harbour of Refuge question.
Fraserburgh	20	List of casualties near Fraserburgh between 1848-58.
	21	Statistics of trade, fishing, &c. at Fraserburgh from 1837 to 1857.
	22	Petition of the Harbour Commissioners, 1858, to the House of Commons praying for the construction of a Harbour of Refuge at Fraserburgh.
	23	List of casualties near Fraserburgh, between 1848–58, furnished by Mr. L. Chalmers.
Peterhead	25	Return of the number of Vessels seen passing the Buchan Ness Lighthouse from 1850–56.
		Return of Loss of Life at Peterhead from Boats between 1848–58.
	27	Return of the number of Vessels which entered Peterhead for refuge, trade, and other purposes during 1855–57.
	35	Petition of English Shipmasters, and others to the House of Commons, praying for the examination of Peterhead, with a view to the construction of a Harbour of Refuge there, 1858.
	36	Petition of the Trustees of the Harbours of Peterhead, to the House of Commons, praying for the examination of Peterhead, with a view to the construction of a Harbour of Refuge there, 1858.
	37	Petition of Scotch Shipmasters, and others, to the House of Commons praying for the examination of Peterhead, with a view to the construction of a Harbour of Refuge there, 1858.
	40	Opinions of Captain Scott, as to Peterhead being the best site for a Harbour of Refuge.
	42	Letter from Mr. W. Penny, of Aberdeen, to Mr. Boyd, containing his views of the fitness of Peterhead for a Harbour of Refuge, 1858.
	43	Memorial from Shipmasters to Mr. Gray, Chairman of Board of Harbour Trustees Peterhead, praying him to bring under the notice of Government the immediate necessity existing for the construction of a Harbour of Refuge at Peterhead.
	44	Returns of Number and Tonnage of Vessels trading between Peterhead and the Thames. Ditto Peterhead and Greenland. Ditto „ Ports in the White sea during 1856–57.
	44*h*	Report relative to increased access to Peterhead Harbour by Messrs. D. & T. Stevenson, 1859.
	44*i*	Letter from Mr. Boyd transmitting amended Return of Wrecks at Peterhead.
	367	Returns showing the number of Men and Boats employed in the White Fishing from Cairnbulg to Collieston, in 1856.
	368	Return showing the number of Men and Boats employed in Fishing, and number of Casualties, &c., from Port Gordon to Sandend, and from Sandend to Whitehills.
	369	List showing the number of Men and Boats employed in the White and Herring Fishing in the Morayshire Coast, 1857-58.

Port.	No. of Document.	Nature of Documents.
Peterhead—*cont.*	371	Copy of a Memorial addressed to the Board of Fisheries, Edinburgh, in 1858 by a Committee of the Commissioners of Supply, Banff, on behalf of the Fishermen, praying for the erection of a Harbour of Refuge in that District.
Aberdeen - -	45	Report on the condition of the Harbour of Stonehaven, in 1812, by Mr. R. Stevenson, C.E.
	46	List of the Number of Vessels wrecked at, or near Aberdeen, from 1846–58, furnished by Mr. Nicoll.
	47	Return of the Number and Tonnage of Vessels arriving at the Port of Aberdeen, in the years 1839, 1849, and 1857, furnished by Mr. Nicoll.
	48	Return showing the Number and Tonnage of Vessels entering the Harbour of Aberdeen for safety, or windbound, from 1848–57, furnished by Mr. Nicoll.
	49	Statement of the Revenue and Debt of the Harbour of Aberdeen, from 1843 to 1857, furnished by Mr. Nicoll.
	50	Return showing the Number and Tonnage of Vessels belonging to the Port of Aberdeen, in the years 1839–1849, and 1857, furnished by Mr. Nicoll.
	54	Memorial of the Committee of the Association of Feuars, Stonehaven, to Select Committee of House of Commons, praying for the construction of a Harbour of Refuge at Stonehaven.
	55	Memorial of Parliamentary Commissioners and Trustees for Harbour of Stonehaven to Members of the Tidal Harbours Commission, recommending Stonehaven as a suitable Site for a Harbour of Refuge, 1846.
	56	Petition of Parliamentary Commissioners and Trustees for Harbour of Stonehaven to House of Commons, praying for the examination into the fitness of Stonehaven, as a Site for the Construction of a Harbour of Refuge, 1858.
	58	Extracts from the Reports of three Engineers, recommending the Construction of Refuge Works in Montrose Harbour.
	59	Montrose Harbour Accounts, ending March 1858.
	60	Local Acts [14, Montrose Harbour (Amendment of Act and Extension of Borrowing Power) Bill] 1850.
	61	Petition of Trustees of Harbour of Montrose, to Lords Commissioners H.M. Treasury, praying for a Grant of Money to deepen the Channel of the River at Montrose.
	62	Return showing the Number and Tonnage of Vessels entering Montrose Harbour, 1858.
	67 *a*	Additional Statement, in favour of Lossiemouth as an eligible Site for a Harbour of Refuge, of the Elgin and Lossiemouth Harbour Company, and the Magistrates and Council of the City and Royal Burgh of Elgin, to the Harbour of Refuge Commissioners.
	67 *d*	Report to the Trustees of the Harbour of Montrose, by Mr. James Leslie, C. E. on the Improvement of the Navigable Channel of the River South Esk.
	67 *e*	Montrose Harbour. Proposed Improvements. Measurement of the Excavation referred to in the above Report.
Arbroath - -	68	Admiralty Report to the Treasury on the Memorial of the Parliamentary Trustees of the Harbour of Aberbrothwick, June 1848.
	69	Extract from First Report of Tidal Harbour Commission on Arbroath Harbour, 1845.
	70	Estimate of Expense of deepening the old and new Harbour of Arbroath, by Mr. J. Leslie, C.E., 1845.
Leith - -	72	Memorial of Committee of Inhabitants of East and West Anstruther and Cellardyke, for promoting the construction of the Union Harbour, 1858.
Glasgow -	77	List of Deserters from Ships belonging to Messrs. Pollok, Gilmour, and Co., Glasgow, and estimated Loss thereon, from 1852–57.
Lochindail -	84	Number of Vessels entering the Loch and Casualties therein from 1836–52.
	87	List of Vessels, Tonnage, Cargo, &c., entering the Harbour, Lochindail.

IRELAND.

Port.	No. of Document.	Nature of Documents.
Portrush - -	90	List showing the Number and Tonnage of Vessels passing the North-east Coast of Ireland, 1854–55.
	91	List of Casualties and Lives lost at or near the Skerries, Portrush, 1843 to 1858.
	92	List showing the Number and Tonnage of Coasting Vessels, which have passed to the Westward of Portrush during 1856-57.
	93	List of the Number and Tonnage of Foreign Vessels which took the North Channel to and from Liverpool and Glasgow, 1856-57.

Port.	No. of Document.	Nature of Documents.
Belfast	110	Belfast Harbour Accounts, 1786 to 1845, and 1845 to 1856.
	111	Belfast Harbour Accounts and Engineers' Report, 1856.
	112	Ditto, 1857.
	113	Belfast Shipping List, 1857–58.
Ardglass	119	Petition to House of Commons from the Inhabitants of Ireland praying for the construction of a Harbour of Refuge at Ardglass.
	121	Abstract of an Address on the advantages of rendering Ardglass Port a Safety Harbour, by G. Beauclerc, Esq., 1854.
	125	Signatures to the above Petition to the House of Commons. (See No. 119.)
	126	Mr. Ogilvie's Title to the Little Customs of Ardglass Harbour.
	127	Signatures from Douglas and Whitehaven in support of Petition to the House of Commons. (See No. 119.)
	128	List of Vessels wrecked between St. John's Point and the Bar of Dundrum Bay.
	129	Petition from Fishermen praying A. W. Beauclerc, Esq., to lay the extreme necessity of the improvement of Ardglass Harbour, before the attention of Lord Eglington.
	130	Signatures from Isle of Man in support of Petition to the House of Commons. (See No. 119.)
	131	Signatures from Penzance in support of Petition to the House of Commons. (See No. 119.)
	132	Signatures from St. Ives and other places in Cornwall, in support of Petition to the House of Commons. (See No. 119.)
	133	Signatures from Arklow in support of Petition to the House of Commons. (See No. 119.)
	134	Copy of Report of Capt. Denham, R.N., and Mr. Rendel, C.E., August 1853, on the restoration of Ardglass Harbour.
Carlingford	138	List of Shipwrecks within the Newry Customs District, 1832–58.
	139	Additional information relative to the List of Wrecks over the Newry Custom District from 1832 to 1858.
	140	Engineers' Report to Committee of the Newry Navigation Company, October 1835, accompanied by Plan.
Waterford	149	Report from Mr. Stephens to Quay Committee of the Waterford Harbour Commissioners, Sept. 1851.
	150	Return of Wrecks and Lives lost near Waterford, from 1816–58, by Commander Bathurst, R.N.
	152	Copy of Memorial presented to the Admiralty 31st March 1854, from inhabitants of Drogheda, praying for a Government Survey of East Coast of Ireland, with a view to the construction of a Harbour of Refuge. Parliamentary Paper.
	155	Mr. Lecky's Report to Waterford Harbour Commissioners, on the shoal below Duncannon, January 1854, with Plan.
	155 *a*	Number of Vessels officially returned as having entered the Harbour, Waterford, 1857.
	1*b*	Soundings taken on the bar, Waterford, by Mr. Stephens, 1851.
Wexford	156	List of Casualties in the Wexford District from 1st January 1848 to September 1858.
	158	Letter from Mr. Keane, Churchtown, recommending Carnsore to the consideration of the Royal Commissioners as a fit site for a Harbour of Refuge, with Plan and Report.
	159	Report of Mr. Barry D. Gibbons on Wicklow Harbour, 1853; with Plan.
	160	Memorial from the Inhabitants of Wicklow to the Admiralty, praying for the construction of a Refuge Harbour at that place, 1854.
	176	Return, showing the number of days the Steam Dredger was working and at rest in Wexford Harbour between July and September 1858.
	177	Wexford Harbour Cash Accounts from 1849–58.
	178	List of the Number and Tonnage of Vessels entering Wexford Harbour from 1852–58.
	179	List of the Number and Tonnage of Vessels belonging to Wexford, 1845–57.
	180	List of Vessels arriving in, and sailing from Wexford, 1845–57.

ISLE OF MAN.

Douglas (Isle of Man).	163	Memorial of Commissioners of Harbours of the Isle of Man to Her Majesty's Treasury, praying for an increased Grant of Money towards improving the several Harbours round the Island, 1853.
	164	Memorial of Commissioners of Harbours of Isle of Man to Her Majesty's Treasury, 1846, praying for inreased shelter in Douglas Harbour.
	165	Project for Great Central Harbour proposed to be constructed at Douglas, by Sir William Hillary, Bart., 1826.

Port.	No. of Document.	Nature of Documents.
DOUGLAS—*cont.* -	166	Capt. Denham's Report to Dock Trustees of Liverpool on proposed Safety Harbour at Douglas, published in the *Manks Advertiser*, 24th November 1835.
	167	Sir John Rennie's Report to Commissioners of Harbours of Isle of Man, with Plan of proposed Asylum Harbour at Douglas, 1835.
	168	List of Wrecks on the Coast of the Isle of Man, 1846–50.

LIVERPOOL.

Port.	No. of Document.	Nature of Documents.
LIVERPOOL - -	175	Returns of Dock Duties at Liverpool, furnished by Mr. S. B. Graves.
	182	Report to Refuge Harbour Commissioners by Mr. W. Danson, recommending Safety Ship, Floating Stages, or Life Preservers, as Breakwaters, &c.
	183	Map of Storm at Liverpool in 1839, with Notes thereon by Mr. Wm. Danson.
	184	Proposed New Landing Stage. Report of Sir Wm. Cubitt thereon, 1854.
	185	Papers by Mr. J. Clare on the Inefficiency of Materials used in Ship Building.
	187	Direction and Strength of the Wind at the Liverpool Observatory, 1852–57.
	187 *a*	Copy of Correspondence between the Board of Trade and the Underwriters' Association, Liverpool, relating to a Fair-way Light, 1855.
	187 *d*	Memorial of Liverpool Underwriters' Association to Board of Trade for a Light in Cardigan Bay.

BRISTOL CHANNEL.

Port.	No. of Document.	Nature of Documents.
ST IVES - -	189	Declaration of Mr. John Paynter, of St. Ives, respecting the correctness of Captain Williams' chart with reference to the rate of the tidal current in the Bay.
	192	List of Vessels which put into the Port of St. Ives in distress from 1st Oct. 1857 to 27th September 1858.
	193	Statement of Mr. W. J. Cetton, respecting the velocity of the Tides at St. Ives.
	194	Return of the Number and Tonnage of Vessels which entered inwards, and cleared outwards, with Cargoes at the Ports of Cardiff, Newport, Swansea, and Neath, 1857.
	195	Return of the Number and Tonnage of Vessels which entered inwards, and cleared outwards, with Cargoes at the Port of Bristol, 1857.
	196	Estimated Quantity of Mackerel landed in the Harbour of St. Ives, September and October, 1855.
	197	Return of the Number and Tonnage of Vessels which have entered inwards, and cleared outwards, at the Port of St. Ives, 1849–57.
	198	Returns of the number of registered Vessels and Boats belonging to the Port of St. Ives in 1857.
	199	Estimate for Building a Breakwater at St. Ives.
PADSTOW - -	206	Statement of Mr. J. D. Bryant, Receiver of Droits of Admiralty and Wreck, Padstow, to Refuge Harbour Commissioners, respecting vessels trading to, and seeking shelter in the Port of Padstow.
	210 *a*	Return of Vessels obliged to run for Padstow in gales at north-west, and the number driven on the Doombar, by Mr. J. D. Bryant.
	210 *b*	Return respecting the constitution of the Padstow Harbour Association for the Preservation of Life and Property from Shipwreck, with Plan of excavations and erections at Stepper Point.
	210 *c*	Estimate of cost of cutting down the Bluff of Stepper Point and making Guide Walls, by Mr. H. Sandercock.
	210 *i*	Letter from Board of Trade respecting Casualties near Padstow, and the silting up of the Bays.
SWANSEA - -	211	Returns of the Trade of the Port of Swansea, 1855–58.
	212	Report of Capt. Christopher Claxton, R.N., on the construction of a Breakwater at the Mumbles, 1833.
	213	Return of the Trade of Swansea Harbour, 1857.
	213 *b*	Return of the Tonnage and Shipping of the Bristol Channel proper, or Ports, North of Lundy, 1857.
	213 *e*	Photographic Views, 4 in number, viz.: — 1. Beaching Ground at the Mumbles, 1856. 2. Beaching Ground and Roadstead at the Mumbles, 1858. 3. The Mud at the Mumbles, 1858. 4. Mumbles Lighthouse and Roadstead, 1858.
	213 *f*	Letter from Mr. G. Francis, of Swansea, transmitting printed account of the difference of time occupied by two vessels in sailing to, and from, the West Indies.
CARDIFF - -	214	Return showing quantity of Coal exported from Port of Cardiff during 1831–57.

Port.	No. of Document.	Nature of Documents.
CARDIFF—*cont.*	215	Return showing the Import Trade to the Port of Cardiff, 1845–57.
	216	Return showing the Export Trade from the Port of Cardiff, 1835–57.
	218	Return of the Number and Tonnage of Vessels entered and cleared at Ports in Bristol Channel.
	219	Return of the Number and Tonnage of Ships inwards, and outwards, foreign, and coastwise, of the Port of Newport, 1856–57.

EAST COAST OF ENGLAND.

BLYTH	221	List of Pilot Ships arrived at Blyth, in March 1850.
	222	Return, showing Number of Vessels that entered Blyth under heavy gales from 1852 to 1857.
	223	Return, showing the Quantity of Coals shipped in years 1855, 1856, and 1857.
	224	Return, showing Number of Vessels, and amount of their Tonnage, entering the Port of Blyth during nine corresponding months of 1857 and 1858.
NORTH SHIELDS (TYNEMOUTH)	226	Returns of the Number and Tonnage of Vessels, the Quantity of Goods shipped ; and the Casualties occurring near, and in the Ports on the north-east coast of England, between 1853–57, furnished by Mr. James Mather.
	229	Return of Wrecks occurring between Robin Hood's Bay and the Farn Islands, comprising the Ports of Warkworth, Blyth, Tyne, Sunderland, Seaham, Hartlepool, and Tees, 1852-54.
	230	Statement and Signatures of shipping firms as to the accommodation for berthing and repairing Vessels in the docks, on the Tyne.
	231	Tyne Piers—Estimate of Contract.
	233	Soundings at the Buoys, North Shields, 1858.
	234 *h*	Return of the Ages of various Collier Vessels.
SUNDERLAND	235	Sunderland Harbour, Engineer's Reports, Part 2.
	237	An Act for the Improvement and Preservation of the River Wear and Port of Sunderland, May, 1830.
	239	Estimate and Plan for constructing Harbour of Refuge in Hendon Bay.
	242	Return of Wrecks which occurred within the limits of the Port of Sunderland, 1852 to 1857.
	243	Report to Commissioners of the River Wear, by Messrs. D. and T. Stevenson, C.E., and Mr. Meik's Observations thereon, 1858.
	244	Sunderland, Dredging Statements, for the years 1853-57.
	245	Soundings taken on Sunderland Bar ; List of Vessels striking thereon; and amount of work done by the Dredgers.
	246	Revenue of the Port of Sunderland for 1842.
	247	Statistics of Trade and Revenue of the Wear, and Port, and Harbour of Sunderland, for 1840–57.
	248	Annual Financial Returns, 1846 to 1857, with Statistical Statements relating to the Port of Sunderland.
	249	Table shewing the comparative increase of the tonnage of vessels between the Ports of the Tyne, the Wear, and Hartlepool, 1853–57.
	250	Sunderland, Returns of Shipping entering and leaving the Harbour, 1857–58.
	252 *g*	Letter from Mr. J. Riddell, C.E., transmitting Section of Outer Breakwater for Harbour of Refuge, Hendon Bay.
HARTLEPOOL	253	Mr. W. O. Mossman's Official Report to the Hartlepool Port and Harbour Commissioners on the North-easterly Gale of 4th January, 1857.
	254	Table of Light and Laden Vessels stranded or wrecked within the Limits of the Port of Hartlepool, 1846–58.
	255	Port of Hartlepool—Table of Storms, 1854-57.
	256	Area of proposed Harbour of Refuge at Hartlepool, by Mr. R. W. Jackson.
	257	Harbour of Refuge in Hartlepool Bay.—Estimate of Cost of Breakwaters, by Mr. Hutchinson.
	258	Port of Hartlepool.—List of the Number of Vessels put in for Refuge, 1852-58.
	259	Number of Lives saved by the Hartlepool Life-boat in the years 1846, 1849, 1850, 1852, 1854, 1856, 1857, 1858.
	260	Printed Description of the Graving Docks, West Hartlepool,
	261	Return of the Number of vessels stranded or wrecked within the limits of the Port of Hartlepool, 1847 to 1857.
	262	Port of Hartlepool, List of Vessels put in windbound on the 16th Oct. 1858.
	263	Return of the Number of Ships entered, and Coal and Coke shipped at West Hartlepool, 1847-58.
	264	Browne's List of Coals, Coke, Patent Fuel, and Iron, exported from all the principal ports in England, Scotland, and Wales, in Sept. 1858.
	265	Return of the Number and Tonnage of Vessels entered and cleared from Newcastle, Shields, Sunderland, Seaham, Hartlepool, Middlesbrough, and Stockton, 1855-57.

Port.	No. of Document.	Nature of Documents.
HARTLEPOOL—*cont.*	266	Area of the Harbour of Refuge in Hartlepool Bay, proposed by Mr. R. W. Jackson, 1858.
	267	Harbour of Refuge in Hartlepool Bay.—Estimates of Cost of Breakwaters for the seven fathom designs, by Mr. Hutchinson.
	268	Harbour of Refuge in Hartlepool Bay.—Estimates of Cost of Breakwaters for the nine fathom designs, by Mr. Hutchinson.
	269	Table showing the Number of Vessels stranded or wrecked and Lives lost, within the limits of the Port of Hartlepool, 1846–57.
	270	Report of Mr. J. M. Rendel, C.E., on the capability of Hartlepool Bay as a site for a Harbour of Refuge, 1855.
	271	List of casualties between Flamborough Head and Newbiggin during the gale of the 4th January, 1857.
	272	List of Ships which have resorted to Hartlepool for Refuge, from 1856 to 1858, extracted from Notarial Register of Mr. Wm. Todd.
	273	List of Ships which have resorted to Hartlepool for Refuge, from 1848 to 1858. Extracted from the Notarial Register of Mr. A. W. Dobing.
	274	List of Ships which have resorted to Hartlepool for Refuge from 1845 to 1854. Extracted from the Notarial Register of Mr. Peter Barker.
	275	List of Ships which have resorted to Hartlepool for Refuge from 1845 to 1858. Extracted from the Notarial Register of Mr. E. Turnbull.
	276	List of Ships which have resorted to Hartlepool for Refuge from 1839 to 1858. Extracted from the Notarial Register of Mr. Thos. Belk.
	278	An Act for the Improvement, &c. of the Port of Hartlepool, for the Construction of a Harbour of Refuge there, and for other purposes. July 1855.
	279	Extracts from a Journal kept by Mr. James Johnston, at Hartlepool, showing the Casualties, Arrivals, &c., from November 1846 to February 1847.
	280	Copy of H.M.S. *Banshee's* Log for the Days of the Hartlepool Gale, October, 1858.
	284 *f*	Specification, Estimate, and Tender for the Construction of Seaton Pier at the Mouth of the River Tees, by Mr. J. Fowler.
	284 *g*	Report to Tees Conservancy Commissioners on Harbours of Refuge in Tees Bay, by Mr. Fraser, C.E. 1858.
	284 *h*	Estimate of cost of Harbour of Refuge on South Side of Tees Bay, by Mr. Fraser, C.E. 1858.
	284 *i*	Report of Mr. Fraser, C.E., on the Construction of a Harbour of Refuge in Tees Bay. 1858.
	284 *j*	Evidence of Mr. Wm. Fallows, respecting the Improvement of River Tees, with six Appendices.
	284 *k*	Copy of the Entries made in the Log Book kept on board the Dredger belonging to the Tees Conservancy Commissioners—20th April to 11th Sept. 1858.
	284 *l*	Return of Work executed by River Tees Dredger from the 21st April to 11th September, 1858, in West Hartlepool Harbour.
	284 *v*	Report on Harbour of Refuge in Hartlepool Bay, by Mr. Abernethy, C.E. 1858.
	284 *x*	Letter from Mr. R. W. Jackson, transmitting *Browne's Export List*, for November 1858.
REDCAR - - -	285	Statistics of the Iron Trade in the River Tees, 1857.
	286	Table of the Force and Direction of the Winds in River Tees, 1843 to 1858.
	287	List of Traffic and Wrecks at Ports on the North-east Coast of England, 1856.
	288	Table showing Number of the Gales of Wind which have prevailed in Tees Bay, with their Direction and Force, and Heights of Barometer and Thermometer during such Gales, 1846–57.
	289	Return of Wrecks on the Tees, 1854.
	290	Return of Wrecks, Sunderland, 1854.
	291	Return of Wrecks, Tyne, 1852.
	292	Return of Wrecks, Tees, 1852.
	293	Return of Wrecks, Sunderland, 1852.
	294	Return of Wrecks, Hartlepool, 1852.
	295	Return of Wrecks, Hartlepool, 1854.
	296	List of Vessels wrecked or stranded at the Tees Mouth, 1839 to 1858.
	297	Form of Book kept by the Receiver of Wreck, Redcar.
	298	Table showing the prevailing Wind on the occasion of each Casualty occurring between the Tees Mouth and Staithes, from 1825 to 1858.
	299	Table showing the Number of Vessels wrecked or stranded, between the Tees Mouth and Staithes, 1825 to 1858.
	300	Evidence as to the Advantages of the River Tees as a Harbour of Refuge, submitted to the Tees Conservancy Commissioners by Mr. J. Fowler.
	301	Opinions of Masters of Vessels when filling up "Wreck Return" at Redcar.
	302	An Act for the Conservancy, Improvement, &c. of the River Tees, construction of a Dock at Stockton, &c., June 1852.
	306 *d*	Estimates by Mr. J. Anderson on the Construction of a Harbour of Refuge in Tees Bay.

Port.	No. of Document.	Nature of Documents.
Redcar—*cont.*	306*f*	Statement of Mr. J. Dunning, C.E., respecting his Proposal for the Formation of a Harbour of Refuge in Tees Bay.
	306 *k*	Letter from Mr. W. A. Brooke to Harbours of Refuge Commissioners, transmitting Plans.
	306 *l*	Paper on the most Destructive Gales in Tees Bay, by Mr. R. Chilton.
	306*m*	Abstract of Wrecks and Stranded Vessels on the south side of Tees Bay, from Staithes to River Tees, 1801–58.
Whitby - -	307	List of Ships that entered the Port of Whitby for Refuge only, 1855 to 1857.
	308	List of Vessels, light and laden, that entered the Port of Whitby, 1855 to 1857.
	309	List of Vessels stranded on the Whitby Coast, 1857.
	310	List of Vessels belonging to Port of Whitby, 1855 to 1857.
	311	List of Vessels wrecked or stranded between Runswick and Robin Hood's Bay, 1850–58.
	312	Return of the Number of Vessels which have entered Whitby Harbour for Refuge and Trade, 1855–58.
	322*a*	Letter from Mr. M. Simpson to the Commissioners of Harbours of Refuge on the Geological formation of Whitby Harbour.
	322*b*	Opinions of Lieut. Bainbridge, R.N., given to Refuge Harbour Commissioners in favour of a Harbour of Refuge at Whitby.
	322	Opinions of Mr. J. Dobson to G. Merryweather, Esq., M.P., respecting Runswick Bay as a Harbour of Refuge.
Filey - - -	323	Petition to the House of Commons of Masters, &c., trading from River Tees and Port of Hartlepool, for a Harbour of Refuge at Filey Bay.
	325	Petition to the House of Commons, of Fishermen of North-East Coast of England, stating advantages of Filey Bay, as a site for a Harbour of Refuge.
	326	Petition to the House of Commons, of Masters, Mates, &c., trading on East Coast of England, desiring to call attention to the fitness of Filey Bay as a site for a Harbour of Refuge.
	328	Facts relating to Inquiry as to best position for a Harbour of Refuge on North-east Coast of England, shown by Wreck Chart of 1857, and Statistics of Gale of 4th January 1857.
	329	Letter from Captain G. Randolph, R.N., to Dr. W. S. Cortis, in favour of Filey Bay as a Harbour of Refuge.
	330	Evidence of certain Masters of Vessels at Bridlington recommending Filey Bay as a Harbour of Refuge.
	331	List of Vessels wrecked, on 4th January 1857, near Flamborough Head.
	354	Copy of an old MS. respecting a Harbour at Filey Bay, dated 1740.
	356	Return of Fishing Vessels lost within the recollection of Thomas Camnush, Fisherman, Filey.
	358	Depositions relating to, and recommendations for Harbour of Refuge at Filey, Dr. L. S. Cortis.

HULL.

	359*a*	Table of the Force and Extent of Gales of Wind at Hull, 1849–57, furnished by Mr. W. Lawton.

SKERRIES—COUNTY OF DUBLIN.

Skerries — (county Dublin).	—	In Re Skerries Harbour of Refuge; Brief for Counsel to attend before Royal Commissioners.
	—	Statement of Shipowners, as to eligibility of the Bay of Skerries for a Harbour of Refuge.
	—	Report of Mr. R. A. Gray, C.E., respecting the Harbour at Skerries.
	—	Letter from Mr. J. Kearns, Pilot, to Hans Hamilton, Esq., M.P., in favour of Skerries as a Harbour of Refuge.
	—	Letter from Mr. Williamson Martin, Brig Senhouse, to Hans Hamilton, Esq., M.P.
	—	Letter from Mr. Henry Bell, Brig Friends, of Workington, to Mr. F. Brodegan, Drogheda.
	—	Letter from Mr. Wm. Corlett, Coasting Smack *Glenfaba*, to Mr. John Johnston, Hacketstown, Skerries.
	—	Letter from Mr. Lewis Foster to Mr. Francis Gowan, Red Island, Skerries.
	—	Letter from Mr. Wm. O. Ward, Dublin.
	—	Letter from Mr. Thos. Crosby, Shipping Master, Dublin, to Hans Hamilton, Esq., M.P.
	—	Letter from Mr. John Good, Floating and Graving Docks, Ringsend, Dublin, to Hans Hamilton, Esq.

Port.	No. of Document.	Nature of Documents.
Skerries (co. Dublin)—*cont.*	—	Account of Number and Tonnage of Ships which have entered inwards at the Port of Drogheda, with Cargoes, 1855–58.
	—	Statement of Captains of Steam and Sailing Vessels from, and to Drogheda, to the Harbour of Refuge Commissioners, recommending Skerries for a Harbour of Refuge.
	—	Average Number of Wrecks, East Coast of Ireland.
	—	Letter from F. Brodigan, Esq., December 4, 1858, to Harbours of Refuge Commissioners, giving list of additional Wrecks near Skerries.
	—	Ditto, December 15, 1858, correcting portion of foregoing letter.
	— —	Report by Mr. Wm. Bald, C.E. on Port and Harbour of Drogheda; with observations on the Skerries.
	—	Memorial for placing a Lighthouse on the "Rock-a-Bill" off the coast of Dublin.
	—	Various letters from J. H. Hamilton, Esq., relating to Skerries.
	—	Letter from Mr. Brodigan relating to Wrecks near Skerries.

MISCELLANEOUS.

Miscellaneous -	372	A Project for raising Sand Banks, forming Breakwaters, and converting Roadsteads into Harbours of Refuge, by Mr. Charles Frow, C.E.
	373	Description of Project for Raising Sand Banks, &c. by Mr. Charles Frow, C.E.
	375	Description of the Patent Sea Barrier and Artificial Beach for the Formation of Harbours, &c., invented by Capt. A. Sleigh.
	376	Letter from Revd. F. R. Glover, M.A., to First Lord of Admiralty, explanatory of project of Island Breakwaters.
	377	Letter from Mr. E. K. Calver, R.N., to Harbours of Refuge Commission respecting Wave Screen.
	378	Notes as to the Construction of Breakwaters for Harbours of Refuge, by Messrs. D. and T. Stevenson, C.E.
	380	Copy of Mr. Bethell's Patent for preserving Timber.
	381	Suggestions for a Floating Breakwater. Anonymous.
	382	Design and Description of Floating Breakwater, by Admiral Taylor.
	383	Estimate—Mr. Casebourne, No. 1. Proposed Wave Screen, by Mr. Calver, R.N. Screen of Wrought Iron and Pine Scupper nailed.
	384	Estimate—Mr. Casebourne, No. 2. Screen of Wrought Iron.
	385	Estimate—Mr. Casebourne, No. 3. Screen of Wrought Iron and Greenheart.
	386	Estimate—Mr. Casebourne, No. 4. Screen of Cast Iron and Greenheart.
	387	Estimate—Mr. Stevenson, C.E. Screen of Cast Iron and Pine Scupper nailed.
	388	Estimate—Mr. Bastow. Screen of Cast Iron and Pine Scupper nailed.
	389	Summaries of Cost of a Mile of Wave Screen. Design of Mr. E. K. Calver, R.N., by Mr. Casebourne.
	390	Plan of Wave Screen, by Mr. E. K. Calver, R.N.
	391	Estimate for a Wave Screen for Harbours of Refuge in six fathoms water, using Wrought Iron Tubes and Wrought Iron Stays and Braces instead of a solid stone Breakwater or Pier, by Mr. S. Bastow.
	392	Pamphlet on the Construction and Principle of the Wave Screen, by Mr. E. K. Calver, R.N.
	394	Letter from Mr. T. H. Ridley, transmitting Remarks on Harbours of Refuge, extracted from Book published by him on Losses at Sea, in 1854.
	395	Opinions of Mr. B. S. Sawder, suggesting a Plan for removing the bars of at the entrance of Harbours.
	397	Reasons for supposing that Island Breakwaters will tend to abate the formation of Bars, by Rev. F. R. Glover, M.A.
	399	Paper relative to the Construction of Breakwaters, by Rev. F. R. Glover, M.A.
	400	Estimate of cost of the Construction of a Breakwater in Dover Bay, by Rev. F. R. Glover, M.A.
	402	Statement in favour of Torbay being an eligible site for a Harbour of Refuge.
	407	Report of the British Fishery Society, 1855-56.

ABSTRACT OF PROCEEDINGS

OF THE

COMMISSIONERS ON HARBOURS OF REFUGE.

1858–9.

1858.	Sittings.			Witnesses Examined.			Page.
	Hours.	Where.	Present.	No.	Names.	Occupation.	
Aug. 26.	8¾	WICK - - -	Admiral Hope, *Chairman.* Mr. Lindsay. Captain Washington. Captain Vetch. Mr. Coode. Mr. Calver, *Secretary.*	11	Mr. Mackie - -	Editor of local paper -	1
					Captain Campbell -	Shipmaster - -	4
					Mr. Sinclair - -	- - - -	6
					Captain Tudor, R.N.	Superintendent of British Fishery Society.	6
					Mr. May - -	Shipmaster - -	8
					„ Dunnet - -	Ditto - - - -	9
					„ Donald Gunn -	Pilot - - -	11
					„ Wm. Bruce - -	Ditto - - -	12
					„ Wm. Steven -	Ditto - - -	13
					„ Sutherland - -	Fisherman - - -	13
					„ J. Bruce - -	Ditto - - - -	14
Aug. 27.	1½	„ - -	Admiral Hope. Mr. Lindsay. Captain Vetch. Mr. Coode. Mr. Sewell, *Secretary.*	3	Mr. May - -	Shipmaster (*re-examined*)	14
					„ Dunnet - -	Ditto „	15
					„ Wm. Bruce -	Ditto „	16
Aug. 30.	7½	FRASERBURGH	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Vetch. Mr. Coode. Mr. Sewell, *Secretary.*	9	Mr. Chalmers - -	Chairman of Fraserburgh Harbour Commission.	17
					„ Abernethy - -	Civil Engineer - -	19
					„ John Dalrymple	Master Mariner - -	22
					„ John Stephen -	Ditto - - -	25
					„ John Reid - -	Lighthouse Keeper -	27
					„ Wm. Stephen -	Fisherman - -	29
					„ Wm. Burnett -	Master Mariner - -	32
					„ A. Stephen - -	Ditto - - -	34
					„ Abernethy - -	Civil Engineer (*re-called*)	34

1858.	Sittings.			Witnesses Examined.			Page.
	Hours.	Where.	Present.	No.	Names.	Occupation.	
Aug. 31.	3	PETERHEAD - -	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Vetch. Mr. Coode. Mr. Sewell, *Secretary.*	2	Mr. A. Anderson -	Provost of Peterhead -	35
					„ D. Stevenson -	Civil Engineer - -	37
Sept. 1.	10	„ -	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Vetch. Mr. Coode. Mr. Sewell, *Secretary.*	28	Mr. D. Stevenson -	Civil Engineer (*re-examined*).	42
					„ P. Burnett -	Shipmaster - -	42
					„ D. Gray - -	Ditto - - -	48
					„ J. Scott - -	Master Mariner - -	49
					„ D. Manson -	Harbour-master - -	52
					„ A. Souter - -	Pilot - - - -	53
					„ Hepburn - -	Shipowner - - -	53
					„ Jas. Leslie -	Civil Engineer - -	55
					„ A. Stuart - -	Builder - - -	57
					„ D. Stevenson -	Civil Engineer (*re-examined.*)	58
					The Hon. T. C. Bruce	- - - - - -	60
					Mr. Young - -	Shipmaster - -	61
					„ Jopp - -	Ditto - - -	62
					„ Meyer - -	Ditto - - -	63
					„ Joheneson - -	Ditto - - -	63
					„ C. Mackenzie -	Merchant - - -	63
					„ Shand - -	Harbour master of Lossiemouth.	64
					„ Winchester -	Shipowner - - -	65
					„ Maclean - -	Shipmaster - -	65
					„ Mathieson -	Master Mariner - -	65
					„ Brock - -	Shipmaster - -	66
					„ Cargill - -	Ditto - - -	67
					„ Buick - -	Pilot - - -	67
					„ Bain - -	Ditto - - -	67
					„ Scehwz - -	Shipmaster - - -	68
					„ A. Souter - -	Assistant Pilot Master -	68
					„ G. Gibson -	Collector - - -	68
					„ Burnett - -	Shipmaster (*re-examined*)	69
					„ Scott - -	Ditto „ -	69
					„ Gray - -	Ditto „	69
					„ Brock - -	Ditto „	69
					„ Boyd - -	Solicitor - - -	69
					„ Grant - -	Banker - -	70
					„ Gatherer - -	Solicitor - - -	70
Sept. 2.	5	ABERDEEN -	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Vetch. Mr. Coode. Mr. Sewell, *Secretary.*	20	The Lord Provost -	- - - - -	72
					Mr. A. Nicol -	Merchant - - -	73
					„ G. Thompson -	Ditto - - -	73
					„ W. Hogarth -	Ditto - - -	76
					„ Adamson -	Shipowner - -	77
					„ Leslie - -	Ditto - - -	77
					„ Thompson - -	Merchant (*re-examined*) -	78
					„ Adamson -	Shipowner „ -	79
					„ Mr. Hood -	Shipbuilder - -	79
					Captain H. Somers -	Shipowner - -	79
					„ Morgan -	Shipmaster - -	80
					Mr. Abernethy -	Civil Engineer - -	81
					„ Hogarth - -	Merchant (*re-examined*) -	83
					„ Talbot - -	Shipmaster - -	84
					„ A. Burns -	Solicitor - - -	84
					Captain Burn - -	Shipmaster - -	86
					Provost Napier, of Montrose.	Shipowner - -	86
					Mr. Mackie - -	Ditto - - -	87
					„ Walker - -	Ditto - - -	88

1858.	Sittings.			Witnesses Examined.			Page of Vol. II.
	Hours.	Where.	Present.	No.	Names.	Occupation.	
Sept. 2.	-	ABERDEEN, *cont.*	- - - -	-	Mr. Burns	Secretary to Harbour Trustees.	87
					„ Tindall	Clerk to the Harbour Trustees, Stonehaven.	87
					„ Stewart	Sheriff Clerk of Kincardine.	89
					„ Kinnear	Solicitor	89
Sept. 3.	3½	DUNDEE	Admiral Hope. Mr. Lindsay. Captain Washington. Captain Vetch. Mr. Coode. Mr. Sewell, *Secretary.*	16	Mr. Lumgair, Provost of Arbroath.	Merchant	89
					„ Macdonald	Clerk to Harbour Trustees.	91
					„ Kidd	Shipowner	92
					„ D. Leslie	Ditto	93
					„ Shield	Shipmaster.	94
					„ W. Baxter, M.P.	Merchant	94
					„ Welch	Shipowner	96
					„ Neish	Merchant	96
					Captain Ewing	Shipmaster.	97
					Mr. W. Baxter, M.P.	Merchant (*re-examined*)	98
					Sir John Ogilvy, M.P.	- - - - -	98
					Captain Ritchie	Shipmaster	98
					Mr. J. Jack	Harbour-master, Dundee	99
					Captain Crighton	Shipowner	100
					„ Walker	Shipmaster	100
					Mr. Welch	Shipowner (*re-examined*)	101
					„ Nicoll	Ditto	101
					Captain Neish.	Shipmaster	102
Sept. 4.	2¾	LEITH	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Vetch. Mr. Coode. Mr. Sewell, *Secretary.*	8	Mr. Broadfoot	Merchant	102
					„ Macgregor	Ditto	103
					Captain Dickson	Shipmaster	106
					„ Mann	Ditto	107
					„ A. Brown	Ditto	107
					Mr. Colme	Fisherman	108
					„ Thompson	Shipowner	109
					„ Jackson	Nil	111
Sept. 6.	5	GLASGOW	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Vetch. Mr. Coode. Mr. Sewell, *Secretary.*	15	Mr. Gilmour	Merchant	111
					„ Allen	Ditto	116
					„ Tennant	Brewer	118
					„ Cameron	Packet Agent	119
					Bailie Clanstein	Underwriter	120
					Captain Crawford	Shipmaster	120
					„ Goodwin	Ditto	123
					Mr. Turner	Town Clerk	125
					Captain Main	Shipmaster	125
					„ Kelso	Ditto	126
					Mr. Dreghorn	Member of the Town Council.	128
					Captain Turnbull	Shipmaster	129
					Mr. J. Mitchell	Shipowner	130
					„ G. Smith	Ditto	133
					Captain Kelso	Shipmaster (*re-examined*)	134
					„ Johnstone	Harbour-master	135
Sept. 7.	2¼	„	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Vetch. Mr. Coode. Mr. Evans. *Secretary.*	1	Bailie Clanstein	Underwriter (*re-examined*).	136

1858.	Sittings.				Witnesses Examined.		Page of Vol. II
	Hours.	Where.	Present.		Names.	Occupation.	
Sept. 10.	5½	PORTRUSH - -	Admiral Hope. Mr. Lindsay. Captain Washington. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	15	Mr. Patton - -	Harbour-master - -	137
					„ J. Campbell -	Pilot - - -	137
					„ Hutchings, 2nd Master, R.N.	Chief Officer of the district Coast Guard.	139
					„ A. McAllister -	Chief Boatman of the district Coast Guard.	140
					„ Gage - -	Land Agent - -	141
					„ G. Scott - -	Pilot - - -	141
					„ A. Clarke - -	Ditto - - -	142
					Captain Thompson -	Master Mariner - -	143
					„ Johnston -	Ditto - - -	143
					Mr. B. D. Gibbons -	Chief Engineer of Works, Dublin.	144
					„ W. Dargan -	Contractor for Public Works.	146
					Captain Bedford, R.N.	Admiralty Surveyor -	147
					„ Fraser, R.N.	Ditto - - -	148
					Mr. Hoskyns - -	Ditto - - -	148
					„ Magowan -	Master Mariner - -	149
Sept. 11.	1¾	LONDONDERRY	Admiral Hope. Mr. Lindsay. Captain Washington. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	8	Mr. Stewart - -	Secretary to the Port and Harbour Commissioners.	149
					„ A. Lindsay -	Port and Harbour Commissioner.	151
					„ John Munn -	Ditto - - -	151
					„ John Mehan -	Ditto - -	151
					„ S. Hatrick -	Shipmaster - - -	151
					„ Jas. McDaid -	Pilot - - -	152
					„ Philip McDaid -	Ditto - - -	153
					„ Stewart - -	Secretary, &c. (*re-examined*).	153
					„ John Gillespie -	Pilot - - -	153
Sept. 13.	3½	BELFAST - -	Admiral Hope. Mr. Lindsay. Captain Washington. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	12	Mr. Tottenham -	Barrister - - -	154
					„ Robt. Corry -	Shipowner - -	157
					„ Barnett - -	Ditto - - -	158
					„ R. Briggs - -	Shipmaster - -	160
					Captain White - -	Harbour-master -	161
					„ M'Loughlin -	Shipmaster - -	163
					Lieut. Tippett, R.N. -	Coast Guard Service -	164
					Capt. J. Campbell -	Shipmaster - -	165
					„ John M'Clane -	Ditto - - -	166
					„ David Patton -	Ditto - -	166
					Mr. A. M'Bride -	Corn Dealer - -	167
					„ Wm. Thompson -	Secretary to Belfast Harbour Board.	168
Sept. 14.	1	ARDGLASS -	Admiral Hope. Mr. Lindsay. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	2	G. Beauclerk, Esq. -	Nil - - - - -	169
					Mr. Hughes - -	Harbour-master - -	169
Sept. 14.	1¾	CARLINGFORD BAY.	Admiral Hope. Mr. Lindsay. Captain Washington. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	4	Mr. J. Ramsay -	Civil Engineer - -	169
					Captain L. Watson -	Harbour-master - -	171
					Mr. Hoskyn, R.N. -	- - - - - -	172
					„ Kirk - -	Nil - - - - -	174

1858.	Sittings.			Witnesses Examined.			Page of Vol. II.
	Hours.	Where.	Present.	No.	Names.	Occupation.	
Sept. 17.	5¾	DOUGLAS, ISLE OF MAN.	Mr. Lindsay. Captain Washington. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary*.	25	Mr. T. Garrett	Nil	175
					„ R. Quirk	Receiver General	175
					„ E. Quayle	Master Mariner	178
					„ R. Gellings	Assistant Harbour-master	180
					„ H. Gill	Shipmaster	182
					„ E. Moore	Secretary to Isle of Man Steam Packet Company	184
					„ T. Garrett	Nil (*re-examined*).	186
					„ R. Marshall	Nil	189
					„ Quirk	Receiver General (*re-examined*).	190
					„ A. Bistable	Barrister	190
					„ J. Hogg	Pilot	190
					„ W. Collister	Harbour Commissioner	191
					„ R. J. Moore	High Bailiff of Peel	192
					„ R. Curran	Shipowner	193
					„ J. Gill	Master Mariner	193
					„ R. J. Moore	High Bailiff of Peel (*re-examined*).	194
					„ W. Milner	Nil	194
					„ E. Farquhar	Fisherman	195
					„ J. Waterson	Ditto	195
					„ J. Waterson, jun.	Ditto	195
					„ J. Sainsbury	Farmer	196
					„ A. Sutherland	Board of Fisheries	196
					„ J. T. Clucas	Advocate	196
					„ C. Stearn	Master Mariner	197
					„ T. Qualtrough	Harbour-master, Port St. Mary.	197
					„ J. Kirmode	Shipmaster	197
					„ J. Hudson	Master Mariner	198
Sept. 18.	3	LIVERPOOL	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary*.	6	Mr. Thompson	Secretary to the Mercantile Marine Association.	198
					„ J. M'Arthur	Shipmaster	198
					„ A. M'Darmaid	Ditto	200
					„ G. Roach	Master Mariner	202
					„ W. M'Clennan	Ditto	204
					„ J. Garson	Nil	205
Sept. 20.	3¼	„	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Sulivan. Mr. Evans, *Secretary*.	7	Mr. W. Dawson	Merchant	205
					„ A. Hawkins	Master Mariner	206
					„ S. R. Graves	Chairman of Shipowners' Association.	208
					„ C. Langton	Insurance Broker	213
					„ A. Coghill	Ship Agent	215
					„ J. Mandell	Shipowner	217
					„ W. Clark	Shipmaster	219
Sept. 23.	3¼	WATERFORD	Admiral Hope. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary*.	8	Mr. J. Farrell	Secretary to the Harbour Commission, Waterford.	221
					„ A. Stephens	Civil Engineer	223
					Captain Wm. Price	Lloyd's Surveyor	226
					„ Bathurst, R.N.	Inspector of Coast Guard	228
					Mr. E. H. Alcock	Pilot Master	229
					„ J. Farrell	Secretary to Harbour Commission (*re-examined*).	231
					„ J. Murray	Pilot	231
					„ S. Mitchell	Master of Pilot Cutter	233
					„ Hassard, M.P.	- - - - -	233

1858.	Sittings.			Witnesses Examined.			Page of Vol. II.
	Hours.	Where.	Present.	No.	Names.	Occupation.	
Sept. 24.	5¼	WEXFORD	Admiral Hope. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	10	Mr. C. A. Walker	Member of the Harbour Commission.	234
					„ M. Devereaux	Pilot Master	237
					„ McCan	Harbour-master of Wexford.	238
					„ M. Boen	Pilot	239
					„ W. Clarke	Shipmaster	241
					„ M. Devereaux	Pilot Master (*re-examined*)	243
					„ E. Roach	Master Mariner	243
					„ M. Boen	Pilot (*re-examined*)	244
					„ J. B. Farrell	Civil Engineer	244
					„ J. E. Redmond	Shipowner	251
					„ W. Coglar	Collector of Customs	254
					„ R. Adams	Member of the Harbour Commission.	254
Sept. 27.	4	ST. IVES	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	9	Mr. Tremaine	Agent to Lloyd's	254
					„ Quick	Harbour-master	255
					„ W. Jennings	Fisherman	258
					„ N. Paynter	Ditto	262
					„ R. Andrews	Shipmaster	263
					„ R. Stevens	Ditto	266
					„ W. Veale	Ditto	267
					„ T. Daniel	Ditto	268
					„ C. Sharp	Ditto	269
Sept. 28.	5	PADSTOW	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	7	Mr. J. D. Bryant	Receiver of Wrecks	270
					„ J. Treadwin	Shipowner	275
					„ R. B. Hellyer	Sub-Commissioner of Pilots.	277
					„ N. Horsewell	Pilot	281
					„ A. Hutchings	Shipowner	282
					„ Bryant	Receiver of Wrecks (*re-examined*).	285
					„ S. E. Martyn	Farmer	285
					Captain W. L. Sherringham, R.N.	- - - - - -	287
Sept. 29.	2½	BIDEFORD	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	6	Mr. W. Yeo	Shipowner	291
					„ J. Williams	Ditto	295
					„ J. Dunsford	Master Mariner	297
					Captain R. Yeo	Harbour-master	299
					Mr. S. Turner	Shipmaster	301
					„ J. Cox	Pilot	301
Sept. 30.	6	SWANSEA	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	13	Mr. Benson	Chairman of the Harbour Trust.	302
					„ W. Lowther	Harbour-master at Neath	303
					„ W. L. Powell	Shipmaster	310
					„ J. Abernethy	Civil Engineer	313
					„ J. Stribley	Shipowner	315
					Captain C. Read, R.N.	Inspecting Commander of Coast Guard.	315
					Mr. J. Richardson	Shipowner	320
					„ J. Rosser	Deputy Harbour-master	321
					„ J. Watt	Shipmaster	322
					„ J. H. Simpson	Ship Agent	323
					„ G. G. Francis	Merchant	324
					Captain G. M. Aldridge, R.N.	- - - - - -	326
					Mr. M. Jones	Shipmaster	327

1858.	Sittings.			Witnesses Examined.			Page of Vol. II
	Hours.	Where.	Present.	No.	Names.	Occupation.	
Oct. 1.	4½	CARDIFF	Admiral Hope. Mr. Lindsay. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	14	Mr. J. C. Williams	Mayor of Cardiff	328
					„ S. Humphrey	Nil	329
					„ J. N. Knapp	Shipowner	330
					„ W. C. Webb	Ditto	336
					„ J. Jones	Shipmaster	338
					„ Gettings	Harbour-master of Newport.	340
					„ E. Hill	Shipowner	342
					„ T. Steel	Retired Shipmaster	344
					„ J. Lewis	Ditto	345
					„ P. Williams	Shipmaster	346
					„ J. Owen	Lloyd's Agent	347
					„ J. Batchelor	Merchant	348
					„ J. Thoms	Ship-broker	348
					„ A. Harvey	Shipmaster	349
Oct. 2.	3	BRISTOL	Admiral Hope. Mr. Lindsay. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	13	Mr. W. Brice	Solicitor	349
					„ J. Drew	Haven-master	351
					„ J. Poole	Merchant	354
					„ J. Drew	Haven-master (*re-examined*).	354
					„ P. P. King	Chairman of Bristol Dock Company.	354
					„ W. Terrell	Chairman of Chamber of Commerce.	355
					„ J. Hall	Pilot	356
					„ J. Gilmour	Ditto	358
					„ W. Thomas	Ditto	359
					„ T. Lee	Shipmaster	360
					„ J. Sawyer	Ditto	361
					„ J. Edwards	Shipowner	361
					„ W. B. Clegrer	Solicitor	363
Oct. 13.	4	NORTH SHIELDS	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	3	Mr. Cowan	Chairman of the Tyne Improvement Commission.	363 368
					„ J. Straker	Shipowner	377
					„ M. Poppelwell	Lloyd's Surveyor	
Oct. 14.	9	„	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	15	Mr. C. Greenhow	Shipmaster	381
					„ Cowan	Chairman of the Tyne Improvement Commission (*re-examined*).	389
					„ Jas. Mather	Tyne Commissioner	390
					„ P. J. Messent	Civil Engineer	395
					„ G. Shotten	Shipmaster	396
					„ W. Wake	Harbour-master	402
					„ R. Tully	Pilot	405
					„ W. Wake	Harbour-master (*re-examined*).	405
					„ J. T. Wawn	Shipowner	407
					„ M. Cay	Shipmaster	409
					„ J. Whitehead	Ditto	411
					„ C. Morris	Ditto	412
					„ J. Joblin	Ditto	413
					„ J. Crozier	Ditto	415
					„ Kendlish	Pilot	415
					„ E. Mace	Shipmaster	417
					„ W. Gray	Ditto	419

1858.	Sittings.			Witnesses Examined.			
	Hours.	Where.	Present.	No.	Names.	Occupation.	Page of Vol. II
Oct. 15.	4	BLYTH - -	Sir Frederic Smith. Captain Vetch. Mr. Coode.	2	Mr. Jas. Abernethy -	Civil Engineer - -	42
					Sir M. W. Ridley -	Nil - - - - -	42
	6	SUNDERLAND -	Admiral Hope. Mr. Lindsay. Captain Washington. Captain Sulivan. Mr. Evans, *Secretary.*	12	Mr. J. S. Robinson -	Clerk to the Commissioners of the River Wear.	42
					„ T. Meik - -	Civil Engineer - -	424
					„ D. Stevenson -	Ditto - - -	429
					„ R. Anderson -	Commissioner of the River Wear.	430
					„ Meik - -	Civil Engineer (*re-examined.*)	434
					„ T. B. Ord - -	Shipowner - - -	435
					„ A. Noble -	Harbour-master -	43
					„ John Gray -	Inspector for Insurance Clubs.	440
					„ W. Simpson -	Ship-master - -	442
					„ J. Henry -	Pilot - - - -	444
					„ W. Simpson -	Ship-master(*re-examined*)	446
					„ T. Sutton -	Pilot - - - -	446
					„ T. Bolton -	Lighthouse Keeper -	447
					„ J. Wilson - -	Shipowner - - -	447
Oct. 16.	9	- - - - -	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	12	Mr. J. Wilson - -	Shipowner (*examination continued*).	449
					„ Stevenson -	Civil Engineer (*re-examined*).	457
					„ Meik - -	Ditto (*re-examined*) -	465
					„ Wood - -	Director of Sunderland Docks.	467
					„ J. Riddell - -	Civil Engineer - -	473
					„ R. Hudson -	Shipowner - - -	474
					„ C. Alcock -	Chairman of Shipowner's Society).	476
					„ G. Spark - -	Shipowner - - -	479
					„ J. Anderson -	Ditto - - -	480
					„ J. Shepherd -	Mate - - -	482
					„ W. Hodge -	Ditto - - -	484
					„ J. Smith - -	Ship-master - -	485
					„ T. Robson - -	Ditto - - -	486
					Commander Heard, R.N.	Inspector of Coast Guard	487
					Mr. R. Brown - -	Chairman of Shipowners' Society.	487
Oct. 18.	7	HARTLEPOOL -	Admiral Hope. Sir F. Smith. Mr. Lindsay. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	2	Mr. R. W. Jackson -	Shipowner - -	499
					„ W. O. Mossman	Havenmaster - -	505
Oct. 19.	11	„	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans. *Secretary.*	16	Mr. R. W. Jackson	Shipowner (*re-examined*).	511
					„ Jas. Johnson -	Nil - - - -	516
					„ E. K. Calvert, R.N.	- - - - - -	516
					„ Wm. Mossman	Haven-master (*re-examined*).	521
					„ R. Russell -	Lloyd's Inspector of Wrecks.	525
					„ S. Fisher -	Shipmaster - -	528
					„ W. Hutchinson -	Contractor - -	532
					„ J. Menzies -	Pilot - - -	535
					„ A. Haisman -	Shipowner - -	538
					„ J. Clark -	Shipmaster - -	540
					„ R. Jordison -	Ditto - - -	541
					„ T. Bayley -	Ditto - -	543
					„ R. Chadds -	Ditto - - -	544
					„ M. Shaw -	Shipowner - -	545
					„ R. Huntley -	Ditto - -	546
					Captain C. Bohr -	Ship-master - -	547
					Mr. J. Stockton -	Ditto - - -	549
					„ T. Smith -	Ditto - -	549

1858.	Sittings.			Witnesses Examined.			Page of Vol. II.
	Hours.	Where.	Present.	o.	Names.	Occupation.	
Oct. 20.	6	REDCAR	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	7	Mr. T. Mackenzie	Shipmaster	550
					„ C. Trotter	Chairman of Tees Causeway Commission.	557
					„ J. Fowler	Civil Engineer	557
					„ J. Fraser	Ditto	568
					„ J. Anderson	Contractor	574
					„ J. Dodds	Clerk to the Tees Conservancy Commission.	575
					„ J. Fowler	Civil Engineer (*re-examined*)	575
					„ Lister	Pilot	576
Oct. 21.	10	„	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	22	Mr. Dodds	Clerk to the Tees Conservancy Commission (*re-examined*)	576
					„ J. Dunning	Civil Engineer	577
					„ W. Brooks	Ditto	578
					„ J. Anderson	Contractor (*re-examined*)	578
					„ J. Fraser	Civil Engineer (*re-examined*).	578
					„ W. Brooks	Ditto (*re-examined*)	579
					„ W. Fallowes	Shipowner	581
					„ R. Coulson	Receiver of Droits for the Admiralty.	585
					„ T. Brown	Shipowner	587
					„ H. Hestead	Pilot	592
					„ T. Pounder	Lighthouse Keeper	593
					„ R. Chilton	In charge of Tees Floating Light.	593
					„ J. R. Burdon	Shipmaster	594
					„ J. Hudson	Ditto	595
					„ A. Petterey	In charge of Dredger	596
					„ A. Ditchburn	Pilot	598
					„ R. Stoker	Shipmaster	599
					„ J. Anderson	Contractor (*re-examind*)	601
					Lieut. Pace, R.N.	Coast Guard Service	602
					Mr. J. Colson	Shipowner	603
					„ R. Dodson	Fisherman	605
					„ J. W. Gerr	Shipmaster	607
					„ T. Thompson	Fisherman	609
					„ A. Brown	Ship-master	610
					„ W. Potts	Fisherman	611
					„ W. A. Brooks	Civil Engineer (*re-examined*).	612
					„ R. Reed	Shipmaster	615
Oct. 22.	4½	WHITBY	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	4	Mr. T. E. Harrison	Civil Engineer	616
					„ G. Smales	Shipowner	622
					„ H. Robinson	Ditto	626
					„ W. Tose	Harbour-master	628
Oct. 23.	7	„	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	21	Mr. G. Barrick	Shipowner	636
					„ W. B. Smith	Ditto	641
					„ J. Ellis	Pilot-master	645
					„ S. Storm	Shipmaster	646
					„ W. B. Smith	Shipowner (*re-examined*)	649
					„ J. Gudwood	Shipmaster	649
					„ T. Douglas	Pilot	652
					„ R. Foster	Shipmaster	652
					„ W. Pattison	Ditto	653
					„ M. Bedlington	Shipowner	653
					„ W. Jameson	Ditto	654
					„ F. Pickernell	Civil Engineer	658
					Dr. G. Merryweather	- - - - - -	659
					Mr. J. Boulby	Civil Engineer	660
					„ R. Brown	Shipowner	662

1858.	SITTINGS.			WITNESSES EXAMINED.			Page of Vol. II.
	Hours.	Where.	Present.	No.	Names.	Occupation.	
		WHITBY, *cont.* -	- - - - -		Mr. J. Dobson -	Shipmaster - -	665
					„ W. Clark - -	Late Harbour-master -	666
					„ R. Pollett -	Shipmaster - - -	666
					„ R. Verrill -	Ditto - - -	666
					„ J. Wood - -	Fisherman - - -	667
					„ W. Ward - -	Ditto - - -	668
					Lieut. H. Bainbridge, R.N.	Coast Guard Service -	668
Oct. 25.	7¼	FILEY - - -	Admiral Hope.	17	Dr. Cortis - -	- - - - -	668
			Sir Frederic Smith.		Mr. Alex. Curzon -	Shipmaster - -	678
			Mr. Lindsay.		„ Geo. Jenkinson -	Fisherman - -	683
			Captain Washington.		„ Thos. Cammish -	Ditto - - -	684
			Captain Sulivan.		„ Benj. Simpson -	Ditto - -	685
			Captain Vetch.		„ John Paul -	Shipowner - -	686
			Mr. Coode.		„ Samuel Cuthbert	Ditto - -	688
			Mr. Evans, *Secretary.*		„ John Andrews -	Agent - - -	690
					„ Fredk. Makinson	Pilot - - - -	693
					„ John Loudon -	Shipmaster - -	694
					„ Wm. Dodds -	Ditto - -	694
					„ Richard Elders -	Ditto - - -	696
					„ James Skerry -	Ditto - -	697
					„ John Ruddock -	Ditto - -	699
					„ Thos. Richardson	Ditto -	700
					„ Geo. Richardson	Ditto - -	701
					„ Richard White -	Coast Guard - -	701
Oct. 26.	6	BRIDLINGTON -	Admiral Hope.	23	Mr. Thomas Prickett	Nil - - - -	702
			Sir Frederic Smith.		„ Wm. Hopper -	Shipmaster - -	703
			Mr. Lindsay.		„ James Heritage	Fisherman - -	[illegible]
			Captain Washington.		„ A. Moore -	Shipowner - -	709
			Captain Sulivan.		„ Jeremiah Hudson	Shipmaster - -	711
			Captain Vetch.		„ Wm. Weir -	Lloyd's Agent - - -	714
			Mr. Coode.		„ Henry Wyrill -	Shipmaster - -	715
			Mr. Evans, *Secretary.*		„ Edward Templer	Pilot - - -	716
					„ Robert Scales -	Shipmaster - -	718
					„ Henry Knott -	Lighthouse Keeper -	720
					„ Samuel Brown -	Pilot - - -	721
					„ Thos. Fishcroft -	Shipmaster - -	722
					„ Thos. Woodhouse	Shipowner - - -	722
					„ John Campleman	Harbour-master -	723
					„ John Wallis -	Shipmaster - -	725
					„ John Lyon - -	Ditto - - - -	726
					„ Joseph Catley -	Ditto - - -	727
					„ Wm. Clark -	Fisherman - -	728
					„ Benj. Sawdon -	Shipowner -	729
					„ John Wilson -	Shipwright	730
					„ John Pockley -	Fisherman	730
					„ Geo. Williamson	Ditto -	731
					„ A. Strickland -	Nil - -	731
Oct. 27.	7¼	HULL - - -	Admiral Hope.	19	Mr. Patrick Bruce -	Secretary to Chamber of Commerce.	732
			Sir Frederic Smith.		„ John Gravel -	Shipmaster - -	732
			Mr. Lindsay.		„ Thomas Farr -	Ditto - -	737
			Captain Washington.		„ Joseph Maycock	Ditto - -	741
			Captain Sulivan.		„ Thomas Dawson	Ditto - - -	743
			Captain Vetch.		„ William Talbot -	Ditto - -	745
			Mr. Coode.		„ James Porter -	Pilot - - -	747
			Mr. Evans, *Secretary.*		„ James Oldham -	Civil Engineer - -	749
					„ John Bell -	Mayor of Great Grimsby	751
					„ George Babb -	Town Clerk, Grimsby -	752
					„ William Brown	Shipowner - - -	753
					„ William Caird -	Shipmaster - -	755
					„ John Atkinson -	Ditto - - -	759
					„ D. P. Halliday	Ditto - - -	761
					„ Sidney Cooke -	Pilot - - - -	763
					„ Robert Elder -	Shipmaster - -	764
					„ T. Marshall -	Ditto - - - -	766
					„ Robert Bartlett	Ditto - - -	768
					„ William Clarkson	Ditto - - - -	770

1858.	Sittings.			Witnesses Examined.			Page of Vol. II.
	Hours.	Where.	Present.	No.	Names.	Occupation.	
Nov. 29.	3	**LONDON** - -	Admiral Hope. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	4	Mr. Wm. Dale - -	Shipmaster - - - -	772
					„ Wm. Turner -	Ditto - - - - -	773
					„ Chas. Noble -	Ditto - - -	774
					„ R. P. Walker -	Pilot - - - - -	776
Nov. 30.	8¼	„ - -	Admiral Hope. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	5	Mr. Jas. Ware -	Water Bailiff, Bridgewater.	779
					„ Chas. Hunt -	Shipowner - - -	783
					„ J. W. Arnold -	Pilot - - - - -	784
					Commander Robertson, R.N.	Surveyor General, Marine Department, Board of Trade.	788
					George Hampton -	Seaman, H.M.S. *Cressy* -	790
Dec. 1.	4	„ - -	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	2	General Sir. J. Burgoyne, G.C.B.	Inspector General of Fortifications.	791
					Captain A. Sleigh -	- - - - - -	802
Dec. 2.	4	„ - -	Admiral Hope. Sir Frederic Smith. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	1	Mr. James Abernethy	Civil Engineer - -	805
Dec. 3.	4½	„ - -	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	1	Mr. James Walker -	Civil Engineer - -	819
Dec. 4.	8	„ - -	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	4	Mr. James Abernethy	Civil Engineer (*re-examined*).	832
					„ Michael Scott -	Ditto - - - -	838
					„ E. K. Calver, R.N.	Admiralty Surveyor, East Coast of England (*re-examined*).	848
					„ G. G. Francis -	- - - - - -	868
Dec. 7. -	8¼	„ - -	Admiral Hope. Sir Frederic Smith. Mr. Lindsay. Captain Washington. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	4	Mr. E K. Calver, R.N.	Admiralty Surveyor, East Coast of England (*re-examined*).	869
					„ Samuel Bastow	Civil Engineer - -	891
					„ T. J. Taylor -	Mining Engineer -	894
					„ Jas. Cowen -	Chairman of the Tyne Improvement Commission.	904

1859.	Sittings.			Witnesses Examined.			Page of Vol. I.
	Hours.	Where.	Present.	No.	Names.	Occupation.	
Dec. 14 -	6½	LONDON—(*cont.*)	Admiral Hope. Sir Frederic Smith. Captain Washington. Captain Sulivan. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	2	Mr. Jas. Abernethy	Civil Engineer (*re-examined*).	904
					Rev. F. Glover -	- - - -	914
Jan. 14.	2	" - -	Sir Frederic Smith. Mr. Lindsay. Mr. Coode. Mr. Evans, *Secretary.*	1	Mr. John Gibson -	Engineer's Foreman -	930
Feb. 18.	4	" - -	Admiral Hope. Sir Frederic Smith. Captain Vetch. Mr. Coode. Mr. Evans, *Secretary.*	1	Mr. M. Scott - -	Civil Engineer (*re-examined*).	933-

ANALYSIS OF THE EVIDENCE.

[*The figures refer to the numbers of the questions.*]

Aberdeen (Witnesses examined at):

Nicol, Alex., Merchant, &c. If a harbour of refuge is made on this coast, it should be between Firth of Forth and Peterhead; but the general opinion is, that the money would be better applied in improving existing harbours, 2371, 2387. Describes the shipping trade of Aberdeen, 2371–2378.

Thompson, Geo., jun., Merchant and Shipowner. A harbour of refuge not necessary on this coast; the money would be better expended in improving existing harbours; but if made, it should be at Aberdeen, where an efficient one could be constructed, 2395, 2402. If north of Aberdeen, it should be at Wick, where it would be of use for the herring fishery, 2408, 2516. Life and property would be better protected by improving the existing harbours, 2413, 2414. A harbour is needed at Hartlepool, 2413.

Hogarth, Wm., Merchant, &c. A harbour of refuge north of Aberdeen unnecessary, 2435. There is no danger in going through the Pentland Firth. The anchorage of Longhope is much improved, 2438–2444. A harbour at Wick would be serviceable to the herring fishery, 2450; and for saving life, 2636. Peterhead would be preferable for the passing trade, 2637. The anchorage at Longhope and other places in the Orkneys supersedes the necessity of a harbour at Wick for the passing trade, 2448. The Orkneys are an excellent place of shelter, 2452.

Adamson, Henry, Shipowner, &c. Harbour of refuge on this coast unnecessary; but if one be constructed, it should be at Aberdeen, 2470–2482. Peterhead and Fraserburgh are both unfit for it, 2483. One at Wick would be serviceable for the herring fishery, 2521–2523.

Leslie, George, Shipowner. Harbour of refuge on north-east coast of Scotland is not necessary, but, should one be constructed, Peterhead is the best place, 2499, 2500. Money would be better applied in improving those existing, 2512. If money be expended for saving the lives of fishermen, it should be at Wick, 2506.

Hood, Walter, Shipbuilder. A national harbour of refuge here is not necessary; better improve those existing, 2528, 2529.

Somers, Andrew, Shipowner. The difficulties of the Pentland Firth are not great; Longhope is a very good harbour, 2537–2542. A harbour of refuge at Wick, Fraserburgh, or Peterhead unnecessary, but would be of service to the fishery at Wick, 2548, 2552.

Morgan, Capt. *John*. A harbour of refuge at Aberdeen is necessary, 2557. If north of Aberdeen, it should be at Peterhead, 2558. Cromarty Firth is one of the best harbours in the world, 2566.

Abernethy, James, Civil Engineer. Aberdeen is not fitted for a great national harbour of refuge, 2570. Existing harbours should be improved in preference to constructing new ones, for securing the safety of shipping on the coast, 2572. The erection of a breakwater, and dredging, would render Aberdeen Harbour fit for the admission of vessels under any circumstances, 2573. There is no silting at the entrance, 2575. Increased depth of water obtained by dredging; eight feet already gained; rough estimate of cost of removing breakwater, 2580–2596. Danger, with certain winds, of harbour entrance with present pier, 2603, 2604. Advantage of proposed breakwater; harbour would then shelter 100 vessels, 2609–2612, 2620, 2632. Explanation of plans laid before the Commissioners, 2613–2619. Description of docks; facilities for repairing and furnishing vessels, 2624–2632.

Abernethy, James. *See* **Aberdeen. Blyth. Fraserburgh. London. Swansea.**

Adams, Richard. *See* **Wexford.**

Adamson, Henry. *See* **Aberdeen.**

Alcock, Charles. *See* **Sunderland.**

Alcock, Edmund Henry. *See* **Waterford.**

Aldridge, George Menby. *See* **Swansea.**

Allan, John. *See* **Glasgow.**

Anderson, Alexander. *See* **Peterhead.**

Anderson, James, *See* **Sunderland.**

Anderson, John. *See* **Redcar.**

Anderson, Robert. *See* **Sunderland.**

Andrews, John. *See* **Filey.**

Andrews, Richard. *See* **St. Ives.**

Ardglass (Witnesses examined at):

Beauclere, George. Mr. Ogilvie gave up his manorial rights in consideration that Government would maintain the harbour, 5284.

Hughes, —, Harbour-master. The destruction of the pier was caused by the steps undertaken by the officer of the Board of Works, 5285–5297.

Arnold, John W. *See* **London.**

Atkinson, John. *See* **Hull.**

Babb, G. *See* **Hull.**

Bain, Thomas. *See* **Peterhead.**

Bainbridge, Henry. *See* **Whitby.**

Barnett, James. *See* **Belfast.**

Barrick, George. *See* **Whitby.**

Bartlett, Robert. *See* **Hull.**

Bastow, Samuel, *See* **London.**

Batchelor, John. *See* **Cardiff.**

Bathurst, Capt. *See* **Waterford.**

Baxter, W. E. *See* **Dundee.**

Bayley, Thomas. *See* **Hartlepool.**

Beauclerc, George. *See* **Ardglass.**

Bedford, G. A. *See* **Portrush.**

Bedlington, Matthew. *See* **Whitby.**

Belfast (Witnesses examined at):

Tottenham, —., Barrister-at-Law. Presents a memorial and makes a statement in favour of a harbour of refuge at Ballycastle Bay, *page* 154.

Corry, Robert, Shipowner. The construction of a harbour of refuge at the Skerries would be a waste of public money, 4913, 4920. There are sufficient harbours of refuge already on the coast, 4919. A harbour at Ballycastle would be very good for private speculation, but not for a public work, 4921. A refuge harbour at the Isle of Man would be of no use to foreign vessels, and not much to coasters, 4927. It would be better to deepen the bar at Carlingford, 4930.

Barnett, James, Shipowner. A harbour of refuge at the Skerries would be of use only to the coasting vessels, 4951. Ballycastle would be a better place for a harbour of refuge than the Skerries or Portrush, 4956. One tenth of the sum expended at Plymouth or Kingstown would construct a safe harbour at Ballycastle Bay, 4962. A harbour at Portrush or Ballycastle would only benefit the coasting trade, 4972, 4973. A harbour of refuge at the Isle of Man not necessary, 4974. There is good anchorage in Belfast Lough, 4976. Deepening and widening of Carlingford Channel would be desirable and of advantage to all vessels, 4979, 4980.

Briggs, Robert, Shipmaster. A harbour at the Skerries is desirable, and if established it would be used by all coasting and foreign, 4992, 5005. If a harbour be constructed at the Isle of Man, it should be at Ramsay, 5008, 5009. Belfast is a national harbour accessible at all times, 5010–5012. Loughindall is not a safe place, 5016.

White, Capt., Harbour-master. Has been looking forward for 20 years for Portrush to be made an asylum harbour, 5034. If the Skerries rocks were connected with the land it would make a harbour safe in all weathers, 5035. As to the Isle of Man, Peel should be the place for an asylum harbour, 5037. Carlingford Lough is capable of great improvement at small expense, 5038, 5064. Wexford will never make a harbour of refuge, 5039. Belfast Lough is used as a harbour of refuge, 5042–5045. It is sufficiently lighted, buoyed, and deepened, 5058. Loughindall would make the finest harbour, but at great expense, 5068, 5070. It is the best place, taking the whole of the district, 5084–5086, 5089. If the Skerries are made a harbour no pilot would be needed, 5075. Kingstown is used as a harbour of refuge, but it is too small, 5083.

M'Loughlin, Michael, Capt. A harbour of refuge at Portrush is greatly wanted, 5094. At the Skerries the broad sound should be closed, 5100, 5101, 5120. A harbour at the Skerries would be preferable, 5109. A harbour of refuge at the Isle of Man should be at Ramsay Bay, 5104.

Tippett, Lieut., Coast Guard Service. The most advantageous position for a harbour of refuge would be in Ballycastle Bay, 5138–5144. Better shelter could be obtained at Ballycastle Bay than at Portrush for less money, 5174.

Campbell, John, Capt. Prefers Portrush as a harbour of refuge, 5184. At the Isle of Man, Ramsay is preferable for a harbour of refuge, 5194–5197.

M'Clane, John, Capt. Would have been glad if he could have run for Portrush Skerries, 5205. The anchorage at Loughindall is excellent; it is easy of access, and much resorted to by the coasting trade, 5211–5213. Lough Larne would be more frequented if better known; the anchorage is good, and there is shelter from all winds, 5216–5218.

Patton, David, Capt. A harbour of refuge is not required at the Skerries, 5222. For a large ship, it is better to take Belfast Lough, 5229, 5232. If one sum of money were to be spent, it should be at Portrush in preference to Loughindall, 5238. Large ships cannot find shelter in Lough Larne, 5239–5241.

M'Bride, Alexander. There should be a harbour of refuge at Portrush Skerries, but Ballycastle is preferable, the coast is clearer and the holding ground better, 5244, 5253. Loughindall is less eligible than Ballycastle, 5272.

Thompson, W., Secretary, Belfast Harbour Board. There is every facility for repairing ships at Belfast, 5282.

BELL, JOHN. *See* HULL.

BENSON, —. *See* SWANSEA.

BIDEFORD (Witnesses examined at):

Yeo, Wm., Shipowner. A harbour of refuge near Hartland Point desirable, 10,407. One pier should be carried off half way between Clovelly and Hartland Point, 10,409. Course of homeward-bound and outward-bound ships, 10,416–10,419. Lundy a good place of shelter when you are well in, 10,424. Sudden shifts of winds are of common occurrence in the Bristol Channel, 10,429. There is great difficulty in making Milford Haven, 10,434, 10,435. Penarth Roads are narrow for large ships, but good anchorage there, 10,438. A harbour at St. Ives would be advantageous for coasters, but not for foreign-going ships, 10,455–10,463. Desirable to make Padstow Harbour more easy of access, 10,466. Lundy Island might be improved as a harbour, but doubts its capacity, 10,470. Prefers Clovelly to Lundy for a harbour; good anchorage there, 10,477–10,481. A safe harbour could not be made at the Mumbles, 10,485. Milford Haven is a fine harbour, but difficult of access on account of fogs, 10,489. Winds from south-west to north-west the most dangerous, 10,491. If Padstow were made a good harbour, many vessels would find refuge there, 10,498. Many vessels leave Penarth Roads, and are obliged to put back; they run for Lundy or Penarth Roads, 10,500. A harbour at Padstow would be a great convenience for such vessels, 10,502, 10,503. Anchorage not good under Lundy, 10,508. If one harbour only were to be made in the Bristol Channel, it should be near Hartland Point, 10,510. The expense would not be so great as that of forming a harbour either at Lundy or the Mumbles, 10,513. Clovelly Bay would be dead to leeward with north winds; a vessel could not get out if blowing hard, 10,517, 10,519. Many coasting vessels often anchor at Clovelly and at Lundy, 10,525, 10,526. Many small vessels find shelter at the Mumbles in summer time, 10,528, 10,529. The tide in Clovelly Bay is an eddy tide, 10,539. There is good holding ground off Clovelly, 10,541–10,543. Many fishermen at Clovelly; great loss of life among them, 10,544, 10,546. There should be a harbour somewhere below Mort Point, 10,554. Instances in which life and property would have been saved if there had been a harbour at Clovelly, 10,556–10,565.

Williams, Joshua, Shipowner. Concurs in evidence of Mr. Yeo, 10,588. Clovelly is the best place for a harbour of refuge, which is necessary; excellent anchorage there, 10,578, 10,579. Milford Haven a blind harbour; you cannot see it when you have come to it, 10,585. No dependence on the anchorage in Penarth Roads, 10,587. No holding ground in Lundy Roads, 10,589. Padstow a bad harbour to enter, 10,595. Loss of life for want of shelter at Clovelly, 10,601. Clovelly Pier is dry at low water, 10,612. Great loss of life in Barnstaple Bay, 10,615. Three life-boats in the bay, which save many lives, 10,618, 10,620. Would rather have a breakwater at Clovelly than at Mort Bay, 10,629–10,634. Little room and not much water at Caldy, 10,636. Penarth Road cannot be improved, 10,645. Thinks a breakwater at Oxwich Bay would be an advantage, if it were of sufficient length, 10,653, 10,664. There is good holding ground, 10,662. A breakwater there would make better anchorage than at the Mumbles, 10,665.

Dunsford, John, Master Mariner. Clovelly Road one of the best places in the Channel for a harbour of refuge, 10,686. Many lives have been lost which such a harbour would have saved, 10,688. Anchorage under Lundy Island not good, 10,689. Mumbles and Penarth Road good for small ships, 10,693, 10,695. Milford Haven a fine harbour, but difficult to make in thick weather, 10,698, 10,807. Clovelly Bay is sheltered from all winds from south-east to north-west, 10,702. No harbour of refuge necessary at St. Ives, 10,708. If Padstow could be made a harbour of refuge it would save life and property, 10,709. A harbour of refuge above Hartland Point is most necessary, 10,713. If deep-water harbours are to be made, Clovelly is the best place, 10,730. Good shelter in Penarth Road for small ships, 10,733. Value of vessels in Swansea Bay makes it worth while to give them a breakwater, 10,743. Oxwich Bay better than the Mumbles, 10,759, 10,770. Would prefer a harbour at Barnstaple Bay, to Hartland, 10,773. Clovelly Roads the best station for a man-of-war for protection of trade, 10,783. Many lives would have been saved by a harbour at Clovelly, 10,792. Also ships south of their reckoning finding themselves suddenly on shore, 10,794–10,799.

Yeo, Richard, Harbour-master at Bideford. Agrees with previous witnesses, 10,816. A harbour of refuge at St. Ives would be an advantage; there is good anchorage, 10,821–10,824. A harbour near Clovelly would be of more service than one further down; there is good anchorage at Clovelly Bay, 10,827–10,831. Timid of anchoring at Lundy, 10,837. If there were a breakwater at St. Ives, it would be better to run there than to bear up for Penarth Road, 10,846. Many vessels anchor in Mort Bay in strong east winds, 10,854.

Turner, Samuel, Shipmaster. Agrees with former witnesses, except as to Hartland Point, too near which would not be safe, 10,866, 10,867. Would not spend money either at Padstow or St. Ives, 10,870. No place along the south coast for a harbour but Bideford Bay, 10,889. Would have a harbour at Clovelly and the Mumbles as well, 10,896. The holding ground is not good in St. Ives Bay, 10,905.

Cox, Joseph, Pilot. Concurs with other witnesses, 10,910. Many vessels lost would have been saved had there been a harbour of refuge at Clovelly, 10,912–15.

BISTABLE, ARTHUR. *See* DOUGLAS.

BLYTH (Examination at):

Abernethy, James, Engineer to Harbour and Dock Company. Account of breakwater, dredging, &c., at mouth of river Blyth, which now forms a sheltered haven; better further improve this and other existing harbours than construct a new one, *page* 421. Extending breakwater, &c., would give a much needed harbour for laden colliers in south-east storms, 14,871. Proposed improvements in Blyth estuary; there is no silting at entrance; pier should be extended to the Beacon Bushes, and lighted, 14,874–88. No perceptible deposit in bed of one part of harbour, but another part slightly raised; proposal to obviate this, 14,895–900. Progress of works, 14,904–13.

BOEN, MARTIN. *See* WEXFORD.

BOHR, CHARLES. *See* HARTLEPOOL.

BOLTON, THOMAS. *See* SUNDERLAND.

BOULBY, JOHN. *See* WHITBY.

BOYD, ANDREW. *See* PETERHEAD.

BRICE, WILLIAM. *See* BRISTOL.

BRIDLINGTON (Witnesses examined at):

Prickett, Thomas. Makes a statement on behalf of committee appointed at a public meeting respecting the capabilities of Bridlington Bay for a harbour of refuge, 23,390.

Hopper, William, Shipmaster. Bridlington Bay is the most eligible site on this coast for a harbour of refuge; it is sheltered by Flamborough Head from the most dangerous gales, and is accessible in all times and all weathers, 23,396, 97. Laden ships have no difficulty in getting round the Head with the wind from the south, 23,390. 2¼ fathoms at low water on Smithic Sand, 23,404. A ship can lay off with safety when there is too much sea to enter the harbour, 23,406, 07. East-south-east wind makes the roughest sea in the bay at high water; at low water it is sheltered by the sand, 23,409–12. Strength of the tide in the bay, 23,417–19. Prefers Bridlington Bay to the Downs, 23,426, 27. Bridlington Bay now is an excellent anchorage at low water, but wants protection from south-east winds, 23,428–30. A harbour at Hartlepool would be more serviceable than one at Filey, 23,440–43. Same broken water at Filey as at Hartlepool, 23,447, 48. Less broken water at Bridlington, 23,449, 50. If harbours were made at Filey and Hartlepool, would run for the latter in a gale, 23,451, 52. Large numbers of vessels resort to Bridlington Bay, 23,453–60. A breakwater on Smithic Sand would protect 3,920 acres, 23,469. There is no alteration in Smithic Sand, 23,480–83. No reason to suppose the bay is silting up; thinks it is deepening, 23,487. Ships' supplies are to be obtained readily at Bridlington, 23,497. A second harbour should be at Hartlepool; it would principally save light vessels bound northward, 23,502–08. A harbour near Flamborough Head would save most laden vessels, 23,510. Deep colliers cannot ride here in safety in easterly gales, 25.518. A harbour near the Head would save more life and property than one anywhere in the depth of the bay, 25,528. More danger in light than in laden vessels, 23,529, 30. A harbour near the Head would save laden vessels driving northwards, and old colliers, the greater part of which founder at sea, 23,532–43. Colliers are mostly old vessels, indifferently found aloft, 23,552–55. Prefers one large harbour in Tees Bay to improving the Tyne, Tees, and Wear, 23,570, 71. Less risk in taking Hartlepool harbour than the harbours to the north, 23,572. Hartlepool would be safest to take in bad weather, 23,575–79. If the Tyne, Wear, and Tees were improved to admit vessels at all times, the heavy sea there would make him prefer Hartlepool, 23,584–90. The freshets in the rivers add greatly to the dangers, 23,591, 92. At Hartlepool it does not come so suddenly from deep water into the channel, 25,595. Off Hartlepool the sea breaks in seven or eight fathoms; the damage is done by the first sea, 23, 596.

Heritage, James, Fisherman. Everything is in favour of Bridlington for a harbour of refuge, 23,611. It makes little difference on which side of the Head a harbour is made, 23,622, 23. Light colliers accumulate in great numbers, 23,625–27. The sea cannot break so heavily here as to the north of the Head, 23,640. Yawls are often compelled to land fish at Bridlington or Hull when they cannot look to the other side of the Head, 23,641. A well-sheltered harbour near the Head would be valuable for the fishermen, who are obliged to go to the Humber, 23,652. The shoal water here makes it comparatively safe anchoring, 23,653. Most casuallies happen south of the Head, 23,656.

Moore, A., Pilot and Shipowner. Knows no place superior to Bridlington for a harbour of refuge, 23,671. Hartlepool is no place to run to in a gale on account of the broken water, 23,676, 77. The first sea is the worst sea, 23,686. Would prefer having the Tyne improved, 23,691. A harbour cannot be made at Hartlepool, 23,696. If only one harbour be made between the Humber and the Fern Islands, it should be at Bridlington; it would save more lives than one at Filey, 23,711–14. It would be valuable for laden colliers unable to weather Flamborough Head, 23,716, 17, 23,727. If the Tyne were improved to 18 feet, would not hesitate to run for it in a gale, but not against the tide, 23,719–26. Vessels that could not fetch the Humber with a south-east gale, or weather the Head, could go into Filey, 23,733. There is not a place on the coast more convenient for a harbour of refuge than this, and will cost less than Hartlepool or any other place, 23,738.

Hudson, Jeremiah, retired Shipmaster. Thinks Scarborough the best place for a harbour of refuge; but, wherever made, it should be in accordance with the line of the tide, 23,746. If there is to be one harbour, it should be in Tees Bay; if two, would have the other at Bridlington, 23,747. The one harbour should be as near as possible central between Spurn and Shields; somewhere about Cloughton, 23,748–54. Would place a second harbour round by the Heugh; both Tees Bay and Filey are good places to fetch with the lead, 23,756. Hartlepool is easy to make with the lead in thick weather, 23,757–65. Would rather keep the sea than run for a bar harbour, 23,766, 67. Wherever an outset goes against a strong wind there must be a heavy sea, 23,770. The sea breaks not more than half a mile outside the Heugh, in six or seven fathoms water, 23,771, 72. No finer place for a harbour than Filey, but for the outset, which is stronger at Filey than at Hartlepool, and is dangerous; but it is the outset from Bridlington Bay that makes it so valuable, 23,777–82. The outset from Filey is so strong that he would rather run for the Tyne during an ebb tide and easterly gale, 23,783. Bridlington Bay is one of the finest bays in England, Ireland, or Scotland, 23,789. The offset from Filey Bay is nearly equal to the race of Portland; it runs 300 fathoms outside the Brigg. 23,794, 95. The centre of the coast is the place for a single harbour; if there are two, Bridlington and Hartlepool, 23,797. If Hartlepool Bay were sheltered by a breakwater in eight fathoms it would be as safe as a room, and be easily approached by the lead, 23,799, 800. The outset at Filey is round the end of the Brigg, inside the buoy, 23,801–05. With an easterly gale there is no finer place than Filey; it would be valuable for laden vessels bound south in any wind, 23,820, 21.

Weir, William, Shipowner. Scarborough Wyke is the best place to make a harbour of refuge, 23,840. It is almost impossible to improve a bar harbour, 23,841, 44. There is no need of two harbours between Flamborough Head and Tynemouth Castle, 23,845, 46.

Wyrill, Henry, Shipmaster. The harbour of refuge to be valuable should be placed upon the most leewardly place; Scarborough Bight would be the best place, 23,866. Objects to Tees Bay because it is a starting point; has shallow water at the mouth; and is at the mouth of a river, 23,871. Prevalent winds on this coast, 23,882. A harbour of refuge should have especial reference to laden vessels, nine tenths of the danger attaching to them, 23,887, 88.

Templer, Edward, Pilot. Bridlington Bay is the best place for a harbour of refuge, 23,897. Few vessels, and but small ones, anchor under Speeton Cliff; a considerable number dodge about there, trying to round the Head, 23,899–904. Vessels under the Head with a flood tide could get round into Bridlington Bay; they do not do it because there is no refuge when they get round, 23,905–08. The tide on shore round the Head is three times as strong as in the offing, 23,909, 10. After Bridlington, would improve the Tyne, Wear, and Tees, 23,915. There is no place for a single harbour off the Tyne, Sunderland, Hendon Bay, or the mouth of the Tees, 23,917. Hartlepool is no better place than Hendon Bay, 23,918. The Tyne is too narrow at the entrance for a harbour of refuge, 23,927. A narrow entrance at Filey would make it as dangerous as the Tyne or Sunderland; but it is not possible to make a harbour at Filey with a narrow entrance, 23,928. Hartlepool is the right place for a refuge, 23,929, 30. It is a good refuge now for light vessels; it would then do for laden colliers, 23,931. A breakwater on Smithic Sands would shelter the largest vessels, 23,934. Many vessels come ashore when they are driving for this harbour, 23,935. It is good holding ground here, 23,937. If a harbour were made here, could reach it by the lead in the thickest weather, 23,938. This is the best coast right down to Scotland, 23,939. Many wrecks in Hartlepool Bay; a breakwater at Hartlepool must have a narrow entrance; the loss of life about the Tees is on account of light vessels running to the ports they are bound for, shipowners not permitting delay, 23,945–47. If caught in a gale, and could not contend against it, would take the first shelter at hand, 23,949–56. It is easier in thick weather to enter Bridlington Bay than Filey Bay, 23,960–65. There is no refuge from Flamborough to the Tyne, 23,967. A harbour in Bridlington Bay would shelter the largest ships in the world, 23,969.

Scales, Robert, Master of a Fishing Vessel. Bridlington the best place on the coast for a harbour of refuge, 23,977, 78. The outset at Filey Brigg makes a very cross sea, 23,979–84. Vessels have run ashore at Bridlington from missing the harbour, but not from driving from their anchors, 23,995. The holding ground is good, 23,996. There is a great outset at Scarborough, but more at Filey Bay, 24,005–14. A large harbour could not be made at Filey to be taken in bad weather, on account of the broken water, 24,016, 17. A breakwater a mile or two long leads to leeward into more broken water, 24,018. The outset stretches from the Brigg two miles east from the south end, 24,019–21. There is some outset from Bridlington Bay, 24,022. If a breakwater were made at Filey it must have an entrance both north and south, 24,023. The breakwater would make smooth water inside, but the tide must go round it, 24,029. The outset sets over the south end of the Brigg, where vessels from Flamborough Head would come, 24,030–34. In an easterly gale, with an ebb tide, would not take an opening in the breakwater where the buoy is; nor the south end, 24,038–40. There is no such thing as a flood in Filey Bay, 24,041. There is good shelter at Bridlington with the wind from north and east to east-north-east, 24,048. This is a convenient and the only waiting place for vessels bound north, 24,050. Never known vessels drag their anchors on shore here, or drive out, 24,051–53. The tide at Filey is from two to three knots, 24,054–56.

Knott, Henry, Lighthouse Keeper. Has known 700 vessels detained in Bridlington Bay by north and north-east winds; 50 or 80 on the other side of the Head, 24,066–84. With north-west and north-east winds vessels most congregate about the Head, 24,094. Prevalent winds on this coast, 24,095–104. Many more vessels pass Flamborough Head than the South Foreland, but of smaller size, 24,115.

Brown, Samuel, retired Pilot. The best places for harbours of refuge are Bridlington Bay and the Tees, 24,134, 35. Would not acknowledge Filey Bay at all, 24,136, 37. A breakwater on the Smithic bank, with entrances north and south, would make Bridlington Bay a complete harbour from all winds, 24,138–41. Tees mouth the next best place, 24,142, 43. Recommends a harbour in Tees Bay, with a breakwater from Hartlepool Heugh to Redcar, 24,145. A harbour large enough could not be made at Redcar, 24,146.

Fishcroft, Thomas, formerly Shipmaster. Would prefer a harbour here to Hartlepool, Redcar, or Filey, 24,159–62. Filey is dangerous in thick weather, having no regular soundings; a child might find Bridlington, 24,163, 64. Could find Hartlepool by the lead ten to one better than Filey, 24,165, 66. With piers on the Salt Scar a better harbour could be made at Redcar than at Filey, 24,167.

Woodhouse, Thomas, Shipowner. Has known vessels under Speeton for a week together that would have been sheltered by a breakwater on Smithic Sand, 24,176. A ship in want of shelter would run for any place, 24,190. Has known vessels drive from their anchors in Bridlington Bay, 24,192. A harbour might be made in Bridlington Bay that vessels could take in all weathers at all times of tide, 24,198.

Campleman, John, Harbour-master. Depth of water at the entrance of Bridlington Harbour, 24,206, 08. Capacity of the harbour, 24,213–18. Bad sea in the harbour in easterly gales, 24,219. The harbour is worse since the south pier was built, 24,228. Harbour dues, 24,232–47. The bay is good holding ground, 24,255. Bridlington Bay is the best place for a harbour of refuge; decidedly preferable to Filey, 24,259–61. Would put a second harbour at Hartlepool, 24,262, 63. Improving the existing harbours, if it could be done, would save most life and property, 24,264. Proposes a breakwater in the bay, 24,266–68. Indifferent means for repairing vessels at Bridlington, 24,278. The bay wants more water, and to be made smoother, 24,282.

Wallis, John, Seaman. There is good anchorage ground in Bridlington Bay, 24,296. A breakwater on Smithic Sand would make this an efficient harbour, 24,297–300. There is rarely any difficulty in getting into the harbour now, but with a breakwater it would be perfectly safe, 24,303. Describes the outset at Bridlington, 24,305. There is a dangerous outset at Filey; nearly the same as at Flamborough, 24,307, 10. Has a great aversion to pier harbours, 24,316. If a proper harbour were made at Filey, it would be valuable, but there are more eligible sites, 24,317, 18.

Lyon, John, Shipmaster. Would like to have the existing harbours improved after Bridlington, 24,338–40, 24,354. Hartlepool is a good place to run to, better than the bar harbours, 24,347, 48. Redcar not so good as Hartlepool, but better than Filey, 24,351–53.

Catley, Joseph, Master. Concurs with previous witnesses; Bridlington Bay is the best place for a harbour of refuge; instances wherein it would have been of service, 24,359–66. There is a tremendous sea at Filey, and would be at the proposed breakwater, 24,374.

Clark, William, Seaman. Agrees with evidence in favour of Bridlington Bay, 24,384. A vessel could enter Bridlington when she could not look at Filey, 24,385.

Sawdon, Benjamin, Shipowner. Agrees as to the excellency of Bridlington Bay; if the proposed plan for Filey were carried out, that bay would silt up, 24,402, 03. Submits a plan of a floating breakwater for the wave to flow over, not under, 24,404, 05. It might be constructed for 150,000*l.* a mile, and would make an efficient breakwater, 24,406. Very heavy shingle in Rocton Bay, from the rocks of Flamborough and Speeton, washed along by the waves, 24,417–25. If the wash over Filey Brigg were stopped, the accumulation would spread over Filey Bay, 24,427. Its deposit is a benefit, thousands of tons being carted over the country for roads, 24,428–32. An opening at the end of the breakwater would be objectionable, 24,435–37. The line of the wave travels along the shore in the same line in which it comes from the deep sea, 24,440–42. The recoil from Filey Brigg is across the sand in front of Filey, in a southerly direction, 24,446. The shingle never travels to the north-west, 24,450.

Wilson, John, Shipwright. A harbour of refuge should be in Bridlington Bay, for the same reasons as previous witnesses, 24,455, 56.

Pockley, John, Fisherman. A harbour in Bridlington Bay would be advantageous to the public, 24,466, 67.

Williamson, George, Fisherman. States the circumstances of the loss of the *Coburg*, 24,485.

Strickland, Arthur. States the financial condition of the harbour commission of Bridlington, 24,494–508.

BRIGGS, ROBERT. *See* BELFAST.

BRISTOL (Witnesses examined at):

Brice, William, Solicitor to the Corporation. Statement in favour of Lundy Island as the best place in the Bristol Channel for a harbour of refuge, 12,511.

Drew, John, Haven-master. Would have been glad of refuge at Lundy, 12,530. The generality of the trade make Lundy, 12,540. Anchorage under the Holmes not good, 12,531. There is great difficulty in getting into Milford Haven, 12,537–38. Mumbles quite unsuited for a harbour of refuge, 12,546. Harbour more useful at Lundy than at Clovelly, 12,549. Lundy Island is a shelter now from west winds; with a breakwater it would shelter also from east winds, 12,556–61. A breakwater from Lundy, and another from the shore, would shelter a large fleet, 12,565. A harbour at Padstow would suit the Bristol Channel trade, and at St. Ives for the general trade, 12,573–75. Clovelly would be preferable to Oxwich Bay, and Oxwich Bay to the Mumbles, 12,576–80, 12,617, 12,614. More property than lives would be saved by a harbour at Lundy, 12,586–89. A light would be of advantage there, 12,591. The holding ground there is good, 12,599. No need for a light on Skerweather Sands, 12,627. If a harbour were made at Lundy, vessels would be towed there, and wait for the wind, 12,641–43.

Poole, James, Merchant, &c. A harbour is needed to relieve the crowded state of Penarth Roadstead; Lundy is the best place for it, 12,633–38.

King, Richard Poole, Shipowner, and Chairman of Dock Committee. Lundy is the most convenient place for a harbour of refuge for the Bristol trade; King's Road preferable to the Mumbles, 12,646. Harbour at Lundy would lower insurance rates; one at Clovelly or in Swansea Bay would not be used, nor at St. Ives or Padstow, 12,647–49.

Terrell, William, Chairman of Chamber of Commerce. The Chamber advocate Clovelly as the fittest place for a harbour of refuge, 12,656, 57.

Hall, James, Pilot. Lundy is the best place for a harbour of refuge; better than the Mumbles or Clovelly, as ships can leave in all winds, 12,663–68, 12,715. Milford Haven is surrounded with dangers, 12,684–86. Prevalent winds in Bristol Channel, 12,687–91. Danger at Lundy in east wind; the holding ground at Lundy is good, 12,701, 12,744. A light would be of but little use; some buoys would be useful, 12,702–10. If a harbour were at Lundy, one would not be needed below it, 12,720–27. Good fresh water at Lundy, 12,736–38. For a harbour between Hartland Point and Land's End, Padstow is the place, preferable to St. Ives, 12,747–49. The entrance would be improved by cutting down the Point, 12,762.

Gilmour, John, Pilot. Necessity for a harbour of refuge in the Bristol Channel; it should be at Lundy Island; better there than at the Mumbles or Clovelly, 12,771–77. If one be made below Hartland Point, Padstow is the best place, 12,778–802. The anchorage between the Holmes and King's Road is pretty good, 12,803–15.

Thomas, William, Pilot. Lundy the best place for a harbour of refuge; there are dangers in running for the Mumbles, 12,822–32, 12,843. Difficulties of Clovelly and the Holmes, and Milford Haven, 12,836–41. Padstow the best place below Hartland Point for a harbour. The baffling winds at Padstow would be obviated by cutting away the Point, 12,859.

Lee, Thomas, Master Mariner. Recommends Lundy Island as the best site for a harbour of refuge; its advantages, 12,868–70. Large numbers of vessels take refuge there now, 12,875, 76. A breakwater should be constructed, 12,879–83.

Sawyer, J. Advocates Clovelly as the site for a harbour of refuge; prefers the Holmes to the Mumbles, 12,884–94.

Edwards, John, Shipowner, &c. Clovelly preferable to

Lundy as a harbour of refuge, on account of baffling winds and fogs, 12,900–14. Some advantages of Clovelly, 12,916–20. Below Hartland Point, if Padstow could be improved it would be as eligible as St. Ives, 12,941–44. "The Stones" preferable to St. Ives Point for a breakwater, 12,945–50.

Clegrer, William Brown, Solicitor. The Chamber of Commerce and the Gloucester and Hartland Canal Company consider Lundy the best site in the Bristol Channel for a harbour of refuge, 12,952, 53.

BROOKS, WILLIAM ALEXANDER. *See* REDCAR.

BROADFOOT, JOHN. *See* LEITH.

BROCK, GEORGE. *See* PETERHEAD.

BROWN, ADDISON. *See* REDCAR.

BROWN, ALEXANDER. *See* LEITH.

BROWN, RICHARD. *See* WHITBY.

BROWN, ROBERT. *See* SUNDERLAND.

BROWN, SAMUEL. *See* BRIDLINGTON.

BROWN, THOMAS. *See* REDCAR.

BROWN, WILLIAM. *See* HULL.

BRUCE, JAMES. *See* WICK.

BRUCE, Hon. THOS. CHARLES. *See* PETERHEAD.

BRUCE, PATRICK. *See* HULL.

BRUCE, WILLIAM. *See* WICK.

BRYANT, JOHN EGER. *See* PADSTOW.

BUICK, JOHN. *See* PETERHEAD.

BURDON, JOHN RIG. *See* REDCAR.

BURGOYNE, Sir JOHN. *See* LONDON.

BURN, JOHN. *See* MONTROSE.

BURNETT, PETER. *See* PETERHEAD.

BURNETT, WILLIAM. *See* FRASERBURGH.

BURNS, ADAM. *See* MONTROSE.

CAIRD, WILLIAM. *See* HULL.

CALLISTER, WILLIAM. *See* DOUGLAS.

CALVER, EDWARD KILLWICK. *See* HARTLEPOOL, LONDON.

CAMERON, JOHN. *See* GLASGOW.

CAMMISH, THOMAS. *See* FILEY.

CAMPBELL, JAMES. *See* PORTRUSH.

CAMPBELL, JOHN. *See* BELFAST.

CAMPBELL, WILLIAM. *See* WICK.

CAMPLEMAN, JOHN. *See* BRIDLINGTON.

CARDIFF (Witnesses examined at):

Williams, J. Croft. Mayor. Extent and increase of trade in ports of Bristol Channel, showing the necessity for a harbour of refuge; the best and most efficient would be at Lundy Island; vessels passing down the Channel chiefly make for the English coast, 11,755–62.

Humphrey, Samuel. Cites the general opinion that Lundy Island is the best place in Bristol Channel for a harbour of refuge; defines the Bristol Channel as included in a line drawn from Hartland Point to Milford Haven, 11,784.

Knapp, James N., Shipowner, &c. Necessity for a harbour of refuge in the Bristol Channel; Lundy Isle is the best site, 11,790–92. Dangers at the Mumbles; good anchorage above the Holmes, 11,792–800. At present, Lundy is not a desirable anchorage from the sudden shifts of wind; the holding ground is very good, 11,801–2. Vessels passing down the channel, invariably keep the English shore, 11,803. Lundy affords shelter from the prevailing winds in the channel; a breakwater there would further improve the anchorage 11,823–26. Effect and position of the breakwater, 11,830–33, 11,836–41. Notwithstanding the advantages existing, still thinks a harbour is needed at Lundy, 11,847. Instance when it would have saved life and property, 11,850. Lundy is at present too exposed, 11,851. Harbour between Hartland Point and Land's End would be of advantage to coasting vessels, but not for general purposes, 11,856. Vessels take refuge at Scilly Islands, but navigation there is dangerous for strangers, 11,856–63. Vessels seldom put back after arriving at the chops of the Channel, if a harbour were at Mumbles, it would be but little used, 11,864–68. Vessels from Newport, &c. usually keep down the English coast; it is safer to pass south of Lundy Island, 11,869–77. If caught with a westerly gale would rather run back to King's Road and Penarth than to the Mumbles, 11,883–99. Oxwich Bay preferable to Swansea for a harbour, 11,905. Light on Skerweather Sand desirable; there would be no objection to a toll for that purpose, 11,906–11. A small light on Rat Island, and buoys, would be useful, 11,924. Harbours should be so constructed as to permit vessels to leave on change of wind; this would be the case at Lundy and at Oxwich Bay, 11,935–38. a harbour be made at Lundy, vessels would be able to get stores, &c. there, 11,939, 40. The anchorage is much cut up at Penarth, and collisions happen from want of room 11,941–42. "Puffs" off Lundy do not extend more than a quarter of a mile, 11,952–56. If a harbour were made at Lundy Island, stores, &c., would be obtainable as cheap there as elsewhere, 11,957–63. For a harbour Lundy is preferable to Clovelly, but Clovelly is preferable to Oxwich and the Mumbles, 11,964–67. Mooring buoys would be useful in Lundy Roads, 11,975–81. Prefers Oxwich Bay to the Mumbles, 11,988. A harbour constructed at the Mumbles would not gain the confidence of the public, 1995. Expense is the only objection to a harbour at Lundy, 12001,2.

Webb, William C., Shipowner, &c. The formation of a harbour of refuge in the Bristol Channel desirable; Lundy Island would be the best place; most vessels down Channel keep the south shore, 12,011. Excellent anchorage at the Spit, 12,014–17. Difficulty of entering Milford Haven, 12,018–20. Dangers at the Mumbles; a harbour at Clovelly would be of great advantage; Lundy is the best site, 12,021–29. Agrees generally with Mr. Knapp's evidence, but doubts the use of buoys in Lundy Roads, 12,030–35. Stores would be obtainable at Lundy, 12,042, 43 If there were a harbour at Lundy, there would be no necessity for another between Hartland Point and Land's End; though one might be useful about Padstow, 12,408–53.

Jones, Jenkin, Master Mariner. Has found Lundy Island a most useful place of shelter, 12,064. If a harbour of refuge be constructed in the Bristol Channel, Lundy should be the place, 12,071, 95. Good anchorage at Lundy; a breakwater would be a great improvement, 12,076–82. Padstow is better than St. Ives for a harbour, 12,083–87. Clovelly Bay is preferable to the Mumbles, 12,090. Oxwich Bay is preferable to Mumbles; the latter is not at all a desirable place to attempt a harbour, 12,102–21. Penarth Roads frequently overcrowded; a breakwater at the Mumbles might prevent this, 12,127–32. Below Hartland Point, Padstow is the best place for a harbour, 12,133–39.

Gettings, —, Harbour-master of Newport. A harbour of refuge is much wanted in the Bristol Channel; Lundy is the best place; no seaman would run for refuge to the Mumbles, 12,149–51. Milford Haven is dangerous to strangers, 12,151, 52. Anchorage is good between Hartland Point and King's Road, 12,153–57. St. Ives is preferable to Padstow for a harbour, 12,158–61. A harbour at Swansea would much increase the trade of the port, 12,165. Ships bound into the Channel always run for Lundy, 12,171. Vessels run for shelter to Penarth, and, if crowded, to the Holmes, 12,177–80. Better to keep the English coast than run for the Mumbles, 12,201, 02. Lundy would be equally available for the trade of Cardiff or Swansea, 12,203. Vessels take refuge at Mumbles with north-west wind, 12,207. A light, and mooring buoys at Skerweather Sands would be very useful, 12,215–22. If a harbour were made at Swansea no large vessel would venture in in a gale at night, 12,232. Green Grounds are hard, 12,234, 35. Bad anchorage at the Mumbles, 12,236–43. A site half way between Lundy and Cape Cornwall would be the best for a harbour, 12,244–48.

Hill, Edward, Shipbuilder, &c. Lundy is the best site for a harbour of refuge, 12,253, 54. St. Ives is preferable to Padstow, 12,255, 56. There is safe anchorage above the Holmes, 12,257. Great caution required in making Swansea, 12,258. The Mumbles dangerous to run for, unless the sand and oyster beds were removed, 12,259–68. Safer to run for the Holmes than Swansea Bay, 12,271. A light would be of some use at Breaksea Point, 12,281. The Channel is sufficiently lighted, 12,288.

Steel, Thomas, Shipmaster. Lundy the most preferable point for a harbour in the Channel, 12,293, 94. Another at Padstow might be serviceable, 12,296–98. Mooring buoys at Lundy would be useless without a breakwater, 12,302–06. A fog light on Rat Island is desirable, 12,307. A harbour at the Mumbles would be of no use in a south-west gale, 12,308–12. The lights at Lundy are too high; one at south end of island needed, 12,321–23. Oxwich is preferable to the Mumbles for a harbour, 12,332–39. Stepper Point should be cut down to facilitate entrance to Padstow, 12,345–53.

Lewis, John, Shipmaster. Concurs generally in previous evidence, 12,362. Lundy is the best site for a harbour of refuge, 12,366. One at Padstow is necessary for the preservation of life and property; better than

St. Ives, 12,371–72. The entrance would be improved by cutting away the land, 12,377. A light vessel needed at Breaksea Point, 12,386.

Williams, Peter, Master Mariner. Concurs generally with previous witnesses, 12,396. There should be a harbour of refuge, first at Lundy, and then one at Padstow, 12,397–400. Padstow at present is difficult to enter; the point there should be cut away, 12,403–18. Another at St. Ives would be available for the coasting trade, 12,423–25.

Owen, J., Lloyd's Agent, &c. Concurs with preceding witnesses, 12,435. There should be a lighthouse on Breaksea Point, 12,436, 37. A harbour at Lundy Island would tend to save life and property, 12,442.

Batchelor, John, Merchant, &c. Concurs in previous evidence; a light necessary to show Breaksea Point, 12,460, 61. Lundy Island is the best site in the Bristol Channel for a harbour, 12,463–65. Swansea harbour unsafe, 12,466, 70.

Thoms, Thomas, Shipbroker, &c. A harbour of refuge needed for general purposes at Lundy, and one at Manhook for the coasting trade, 12,471–84.

Harvey, Andrew, Shipmaster. Difficulty of entering Padstow; cutting down Stepper Point would be an improvement; a breakwater necessary, 12,491–99. Lundy is the best place for a harbour, Clovelly next; objects to the Mumbles, 12,504–8.

Cargill, John. *See* Peterhead.

Carlingford Bay (Examination at):

Ramsay, John, C.E. The bar at Carlingford Bay is a natural formation, without rocks, 5301–5303. The bottom is of clay, 5305, 5312, 5318, 5322. A channel 500 feet wide could be made in three years for 25,000*l.*, 5308, 5309, 5325, 5326. There is good holding ground here, 5342.

Watson, Leonard, Capt., Harbour-master. For a harbour of refuge there should be a channel 1,000 feet wide, 5362–5364. There are not sufficient buoys and beacons; there are no funds to provide them: pays 40*l.* rent for the right of collecting dues; receives about 80*l.* annually; expends about 30*l.* in maintaining the present buoys, 5371–5379. If the bar be deepened, other shoals and rocks must be also deepened, 5400.

Hoskyns, Lieut. If the bar of Carlingford Bay were deepened the anchorage inside would be a sufficient harbour for shelter, 5402. The shoals are not sufficiently buoyed or beaconed, 5411. There is no place in the vicinity where a better harbour of refuge might be made at as small a cost, 5414. A width of 600 feet is not sufficient for the channel, 5421–5423. When dredged, buoyed, and beaconed, it would be a complete harbour of refuge to passing vessels with the wind on shore, 5442–5445. If the cut were made it would be necessary to place leading lights, 5455.

Catley, Joseph. *See* Bridlington.
Cay, Martin. *See* North Shields.
Chadds, Robert. *See* Hartlepool.
Chalmers, Lewis. *See* Fraserburgh.
Chilton, Robert. *See* Redcar.
Clanston, —. *See* Glasgow.
Clark, John. *See* Hartlepool.
Clark, William. *See* Bridlington.
Clark, William. *See* Liverpool.
Clarke, Alexander. *See* Portrush.
Clarke, W. *See* Wexford.
Clarke, William. *See* Whitby.
Clarkson, William. *See* Hull.
Clegrer, William Brown. *See* Bristol.
Clucan, John Thomas. *See* Douglas.
Coghill, Alexander. *See* Liverpool.
Coglar, William. *See* Wexford.
Colme, Robert. *See* Leith.
Colson, John. *See* Redcar.
Cooke, Sidney. *See* Hull.
Corby, Robert. *See* Belfast.
Cortis, Dr. *See* Filey.
Coulson, Robert. *See* Redcar.
Cowan, —. *See* North Shields.
Cowen, Joseph. *See* London.
Cox, Joseph. *See* Bideford.
Crawford, T. *See* Glasgow.
Crewe, Read. *See* Swansea.
Crighton, David. *See* Dundee.
Crozier, James. *See* North Shields.
Curran, Robert. *See* Douglas.
Curzon, Alexander. *See* Filey.
Cuthbert, Samuel. *See* Filey.

Dale, William. *See* London.
Dalrymple, John. *See* Fraserburgh.
Daniel, Thomas. *See* St. Ives.
Dargan, William. *See* Portrush.
Dawson, Thomas. *See* Hull.
Dawson, William. *See* Liverpool.
Devereux, Mark. *See* Wexford.
Dickson, —. *See* Leith.
Ditchburn, Andrew. *See* Redcar.
Dobson, John. *See* Whitby.
Dodds, —. *See* Redcar.
Dodds, William. *See* Whitby.
Dodson, Robert. *See* Redcar.

Douglas (Witnesses examined at):

Quirk, Richard, Receiver General. Plans, prepared for a harbour at Douglas, objected to by the Admiralty, 5468–5474. The pier that could be constructed with the money available would not have satisfied the wants of the port, 5476–5485. All works were suspended till the result of the present Commission was known, 5491–5495. Sir J. Rennie's plan in 1835 would have given a space of 45 acres, at a cost of 216,652*l.*, 5517, 5518. A strong public feeling is in favour of making Douglas Bay a harbour of refuge; it would save life and property, 5554–5557. A pier, 850 feet long, from the Two-gun Battery would protect the harbour sufficiently, 5566; but not the roadstead, 5571. Port Erin would be a good asylum for the fishing boats, 5587. A harbour there would give great facilities to the fishing trade, 5602. The fishermen would contribute 800*l.* towards it, 5609.

Quyle, Edward, Master Mariner. A pier, according to the plan proposed, would be sufficient for the local trade, but would leave no room for ships seeking shelter, 5632–5635. Douglas Bay is the best site in the island for a refuge harbour, 5649. Sir J. Rennie's is a very bad plan, 5651. The mail steamers are frequently unable to land mails or passengers; one was detained five days by the wind, and from the want of a breakwater, 5658–5670. Capt. Denham's plan is the best, because the largest, 5742.

Gellings, Robert, Assistant Harbour-master. A harbour of refuge is required at Douglas, as well for the passing as the home trade, 5746–5747. A pier from the Two-gun Battery of 550 feet would be too small, 5769. Steamers might land passengers at it, 5784. 800 feet would not protect the harbour entirely, 5774. To make it a harbour of refuge, a breakwater would be required from Douglas Point, 600 or 700 yards in length, 5778–5783. Steamers arriving at half-ebb would have to wait about six hours, 5811, 5812. A large space is required in Douglas Bay to afford proper shelter, 5837. If there were a breakwater the fishing boats could be always out, 5850.

Gill, Henry, Shipmaster. A harbour of refuge at the Isle of Man would be of essential service for the general trade, 5859; would save much life and property, 5939. It should be at Douglas, on Captain Denham's plan, 5862–5869, 5913. A pier from Battery Point of 850 feet would be of no use for large ships, 5881–5885. A pier from Douglas Head would form a good refuge, 5889. The steamer was detained last March for five days; a breakwater outside would have enabled her to put out, 5919, 5921. The Whitehaven boat drifted out to sea; the passengers were in great peril, 5925–5928.

Moore, Edward, Secretary to Steam Packet Company. Steamers are often unable to proceed to sea, and passengers unable to land, 5951–5953. A pier from the Two-gun Battery would be of use for the protection of the steam-boats and accommodation of passengers, 5967–5970. A pile pier run out from the stone-pier head would be more beneficial without a breakwater than a breakwater without a pile pier, 5971–5977, 5993. A breakwater would make it complete, 5992. A landing pier for passengers to Douglas is decidedly necessary, 6002.

Garrett, Thomas, Gentleman. Reads a letter advocating the formation of a national harbour of refuge at Douglas, by extending a breakwater from Douglas Head, 6015.

Marshall, Robert, Landowner. Would give every facility for the formation of a road from the Two-gun Battery Point, 6067–6075.

Bistable, Arthur, Barrister. Drifted out to sea in a boat, in proceeding on board the packet; much loss of property and jeopardy of life, 6100–6102.

Hogg, Joseph, Pilot. A breakwater from Douglas would be of great service in saving life and property, 6108–6112. A pier from the Two-gun battery would not be of so much service, 6113–6115. There is good holding ground in the centre of the bay, 6131–6135.

Several vessels have been lost for want of a harbour of refuge at Douglas, 6137–6147. There is great risk in landing passengers in a south-east wind, 6153.

Callister, William, Harbour Commissioner. The same facilities exist at Ramsay for making a harbour of refuge as at Douglas, 6158. But if only a moderate amount is to be expended, Douglas is preferable, 6165–6168. Ramsay for a large harbour, Douglas for a small harbour, 6180.

Moore, Robert John, High Bailiff. Makes a statement in behalf of a pier at Peel for the protection of the fishing boats, 6183. Much damage accrues to the boats for want of it, and loss of earnings, 6186. Opinion at Peel, that for a general harbour of refuge, Douglas is the best place, 6193.

Curran, Robert, Manufacturer and Shipowner. 600 fishing boats frequent Peel Harbour in the fishing season. To escape foul weather, the boats run for the harbour, and most get aground. They cannot all get out on a change of wind; and the loss accruing exceeds 5,000*l.* If a breakwater were made, the numbers of Peel boats would be doubled, 6200.

Gill, John, Master Mariner. If a national harbour were constructed it should be at Douglas, 6216–6218. There is a great necessity for a harbour at Peel for the fishing boats, 6219–6222.

Milner, William. There is no protection at Port Erin, the best port for fishing, and a breakwater would afford ample; the fishermen would willingly contribute towards the expense, 6249, 6250.

Farquhar, Edward, Fisherman. Much loss is sustained for want of a harbour at Port Erin, the nearest place to the best fishing ground, 6262–6270. Would willingly pay 2*l.* a year towards it, 6275, 6276. As a rule, the best takes of fish are during unsettled weather, 6283. There is good holding ground off Port Erin, 6292–6294.

Waterson, John, Fisherman. Would gladly subscribe for a harbour, 6301. Boats wrecked would have been saved if there had been a harbour at Port Erin, 6308.

Waterson, John, jun., Fisherman. A harbour at Port Erin would have saved some boats that were lost, 6317. Would be willing to subscribe towards a harbour, 6235.

Sainsbury, John, Farmer. Has heard from about 30 boatmen they would subscribe towards a harbour, 6337*f*.

Sutherland, Alexander, of the Board of Fisheries, Scotland. The fishing season lasts for four months on the west side of the island, and about three weeks on the east, 6348–6352.

Clucan, John Thomas, Advocate. At a meeting, several hundred fishermen unanimously agreed to subscribe for a harbour. A deep-water harbour would be of great use at Port Erin, 6357–6369.

Stearn, Charles, Master Mariner. Douglas Bay is the best site for a harbour of refuge, if the exposed part is enclosed; objects to the line from the Two-gun Battery, there would be no room, 6364–6373.

Qualtrough, Thomas, Harbour Master, Port St. Mary. Many vessels have gone ashore in the bay from want of protection, 6382–6386. Some of the boats would give 5*l.* towards a breakwater, 6396.

Kirmode, James, Master of a coaster. Port St. Mary or Derby Haven preferable to Douglas Bay for a harbour of refuge for the fishing boats, 6403, 6412–6419. And for coasters; it would afford shelter in all winds, 6420–6422.

Hudson, John, Master Mariner. A breakwater from the Point at Port St. Mary would afford shelter to vessels of 400 tons, 6428–6430. Port St. Mary has been much injured by shipping away the stones, 6431–6433. A jetty on the point would give protection in all winds, 6439.

DOUGLAS, THOMAS. *See* WHITBY.

DREGHORN, DAVID. *See* GLASGOW.

DREW, JOHN. *See* BRISTOL.

DUNDEE (Examination at):

Lumgair, —, Provost of Arbroath, Merchant, &c. Arbroath Harbour might easily be made a subsidiary harbour of refuge, for general purposes, by deepening three feet, at an outlay of 10,000*l.*, giving a depth of 16 feet, which is asked of Government as a grant; large vessels might then come in 12 out of 24 hours; only small vessels can enter at all now; 60,000*l.* already laid out by local authorities; three statements read, 2766–2775. There is no harbour between Peterhead and Arbroath where boats may take shelter, 2781.

Macdonald, John, Clerk to Arbroath Harbour Trustees. General opinion that grants to small harbours would be more beneficial than constructing one large one. Great necessity for deepening Arbroath Harbour and its entrance; vessels can always take it if there is water enough; boats have been saved at Arbroath, driven from Peterhead, Aberdeen, Stonehaven, and Montrose; local authorities having expended 60,000*l.*, ask a grant of 10,000*l.* to enable them to deepen the entrance, 2785. Numbers of vessels and lives lost for want of harbour entrance being deepened, 2795–2798.

Kidd, Geo., Shipowner, Arbroath. National harbour of refuge desirable, but no available spot between Firths of Forth and Pentland, 2815–2817. 300,000*l.* would be more usefully applied in improving the existing harbours than constructing a new one, 2820, 2821.

Leslie, David, Shipowner, Arbroath. Harbour of refuge between Pentland Firth and the Firth of Forth desirable, 2835. Cromarty, the best harbour in the world, supersedes the necessity of a refuge harbour at Wick, Fraserburgh, or Peterhead, 2837, 2838. Better improve existing harbours, 2843. Would rather run to Arbroath than to the Tay or Montrose, 2861. Wrecks would have been saved had there been more depth, 2862.

Shield, Geo., Shipmaster. It would be better to improve the existing harbours than construct a new one, 2686, 2687. Arbroath Harbour is easily taken, 2870. Little danger of damage if more water, 2871.

Baxter, W. E., M.P. for Montrose. New national harbours of refuge are not so much required as the improvement of those existing, 2877–2881. The same as to the north-east coast of England, 2883. Loss of life by wrecks, 2888–2892. Money should be distributed over several, preferably to being spent on one harbour, 2892–2895.

Welch, George, Shipowner and Ship Agent. A national harbour of refuge is not needed between the Firths of Forth and Pentland, 2909, 2910. At high water the Firth of Tay is a harbour of refuge for all vessels on the coast of Scotland, 2923–2925. No improvement could be made in the lighting and buoying, 2926. Vessels drawing but 16 feet may safely run there at any time, 2935. The sands do not form a bar; there is a clear channel, 2936–2939. A harbour of refuge is needed on the north-east coast of England, in Tees Bay; the harbour should be in the bight of a bay, 3099–3110.

Neish, Thomas, Merchant, &c. A harbour of refuge is not required on the north-east coast of Scotland, 2943. One might be useful to the fishery at Wick, 2944. If a little expenditure would save life and property, it should be made; but it is doubtful, 2946.

Ewing, Thomas, Shipmaster. A harbour of refuge is not needed on north-east coast of Scotland, 2966. Existing harbours might be improved, 2967. Cromarty is a good harbour, 2972. Harbours of refuge would not save the lives that are yearly lost, 2975.

Ogilvy, Sir *John*, M.P. for Dundee. Concurs with Mr. Baxter and Mr. Neish, 2997. Better improve the existing harbours on this coast than construct a new one, 2998.

Ritchie, David, Shipmaster. Harbours of refuge required in England more than in Scotland, 3005. There is no place between Pentland Firth and the Forth that a vessel of 300 tons could take refuge in, 3010. There is no harbour between the Tyne and Yarmouth Roads that a vessel drawing 12 feet at low water could run into, 3016.

Jack, John, Harbour-master of Dundee. Harbour of refuge needed near the Tees or Hartlepool; Filey not a good spot, 3021–3025. Better construct one great harbour of refuge than improve smaller ones, 3026–3029. Harbour should be in the bight of a bay, 3030–3032. 50 vessels lost on English coast to one on north-east coast of Scotland, 3033. Many vessels are baffled by head winds off Flamborough Head, 3037–3045.

Crighton, David, Shipowner. A harbour of refuge on north-east coast of Scotland is not necessary; better improve those existing, 3048–3051. A harbour much needed on north coast of England, about the Tees, 3053. A harbour at Wick would be serviceable to the herring fishery, 3054–3070.

Walker, Capt. *John*. Harbour of refuge much needed on east coast of England; Filey the most eligible spot; one large harbour there would save more lives and property than the improvement of the existing ones, 3074–3098. Numbers of vessels are often congregated at Flamborough Head, 3090.

Nicoll, William, Shipowner. There is a necessity for harbours of refuge on this coast; better to expend money on various parts than to construct one great harbour, 3116–3119.

Neish, Capt. *James*. Money had better be expended on

several harbours than on one, 3130. But if a place could be found where vessels could enter at all times, one would be of more service generally, 3131.

See also MONTROSE. STONEHAVEN

DUNNETT, JAMES. *See* WICK.
DUNNING, JOHN. *See* REDCAR.
DUNSFORD, JOHN. *See* BIDEFORD.

EDWARDS, JOHN. *See* BRISTOL.
ELDER, ROBERT. *See* HULL.
ELDERS, RICHARD. *See* WHITBY.
ELLIS, JAMES. *See* WHITBY.
EWING, THÖMAS. *See* DUNDEE.

FALLOWES, WILLIAM. *See* REDCAR.
FARQUHAR, EDWARD. *See* DOUGLAS.
FARR, THOMAS. *See* HULL.
FARRELL, JAMES BARRY. *See* WEXFORD.
FARRELL, JOHN. *See* WATERFORD.
FILEY (Witnesses examined at):

Cortis, Dr. Makes a statement showing the advantages of Filey for a harbour of refuge, on account of its site, natural advantages, and cheapness with which the works could be constructed, *pages* 669–674. Filey is opposite the Dogger Bank, the chief fishing ground, 22,281. There is no movement of sand along Filey Bay, 22,287. The soundings taken by the fishermen give rather more water than the Admiralty soundings, 22,293–95. Filey Brigg would intercept the movement of sand along the coast, of which there is some in Scarborough of a local character, 22,296–300. There is excellent oölitic stone near Carness adapted for the breakwater, 22,307. Little loss of life occurs here; the life-boat is well manned, and vessels take the beach easily, 22,315. Prevalent winds on this coast, 22,334–40. There is no silt in the bay; little débris from the cliffs; and no sand under the Brigg, 22,341–45. A second harbour would be required, 22,353–56. Filey would save most life and property in laden vessels, 22,357. The greatest loss of life occurs in laden vessels, 22,359. Vessels have accumulated at Flamborough Head for six weeks, 22,370. After Filey, most seamen would be in favour of improving the existing ports; but there is great doubt whether it can be done, 22,372–75. Believes that all the thirty-two vessels caught in the gale on January 4 near Flamborough Head could have taken shelter in Filey had there been a harbour there, 22,376–81.

Curzon, Alexander, Master. A harbour in this locality is absolutely necessary; but there should be a second one somewhere in the Tees bight, 22,416. The harbours of the Tyne, Wear, and Tees could not be improved, 22,418. Would prefer a harbour somewhere about Redcar, 22,419–29. Redcar would be best for saving life, but Hartlepool would be best for an outlet for ships, 22,430. After the improvement of Filey, would apply the public funds either at Hartlepool or Redcar, 22,431–33. Considers it an imperative duty to construct a harbour of refuge on this coast, and the most advantageous site is Filey Bay, 22,441–44. Vessels caught 10 miles off Scarborough in an east-south-east gale could weather Filey Brigg when they could not weather Flamborough Head, 22,461. All things considered, prefers Redcar to Hartlepool, 22,462, 63. Dangerous broken water off Hartlepool Bay, but worse off Shields Bay, 22,465–72. To make a harbour of refuge at Hartlepool it would be necessary to enclose the bay by a breakwater with two entrances, 22,473–75. Even were the piers carried to five fathoms water, there would be danger in taking them, 22,476, 77. Cites cases of vessels caught off Flamborough Head that a harbour at Filey would have benefited, 22,480. It would be a great advantage to laden vessels to have a harbour of refuge near Flamborough Head, 22,485. Most lives are lost in laden colliers; a harbour of refuge should be made more particularly for them, 22,488, 89. Filey Bay would be equally valuable for light and laden colliers, 22,491. Two small harbours equally accessible would be more advantageous than one large one, 22,494. The Tyne and Wear dangerous from strong freshets, 22,497, 98 If a harbour were made at Filey, ships' supplies would never be wanting there, 22,499, 500. The Tyne, Tees, and Wear are incapable of being made perfectly safe, 22,505. A harbour of refuge at Hartlepool, not at the entrance of the river, would be preferable, 22,506. A ship in an easterly gale ten miles off Scarborough could fetch Hartlepool more easily than Filey, 22,513, 15. If the wind southerned on ships off Flamborough Head, masters would be justified in taking shelter at Filey, 22,520–25. Thousands of vessels anchoring off the Head would use a harbour of refuge, 22,526–29.

Jenkinson, George, Fisherman. Fishing boats keep the sea better than laden colliers, 22,538–41. In a breeze, runs for the Humber, Bridlington, or Scarborough; dares not go to Whitby, 22,542–48. A harbour at Filey would be very serviceable; many opportunities of fishing lost for want of it, 22,549–51. The bay never silts up; there is more water than formerly, 22,553, 54. Can easily reach the Humber, and it is good anchorage, but could reach Filey in half the time, 22,557–66. 1,400 vessels come to the Doggerbank; in a gale, the French keep the sea, the English run for the Humber, 22,569–72. Bridlington Bay is a convenient place with the wind from the north, 22,587. Instances of vessels lost that would have been saved if there had been a harbour, 22,597–620.

Cammish, Thomas, Fisherman. From the fishing ground, with the wind south-east, you cannot get to Filey, 22,629. At Scarborough there is not room for the vessels at neap tide, 22,630–38. Supposing Scarborough shut, there is no place to take, 22,639. Cases of lives that might have been saved by a harbour of refuge, 22,647–52. Scarborough is no harbour of refuge for fishing boats in a south-east gale, 22.653–60. Filey Bay is better now than ever he knew it, 22,665–68. Cites an instance in which he was nearly lost through want of a harbour at Filey, 22,670.

Simpson, Benjamin, Fisherman. With the wind at south-east you cannot fetch a vessel from the Dogger Bank, 21,688. Instances accidents and loss of life through want of a harbour of refuge, 22,690–96. Scarborough is no place for fishing boats, except with the wind northerly, or away from south-south-west, 22,697–702.

Paul, John, Shipmaster. There should be one harbour at Filey, and one in the bight of the Tees, which would be better than improving the ports of the Tyne, Tees, and Wear, 22,716, 17. The bar harbours about the Tyne and Wear are unsafe from freshets, 22,718. Instances of difficulty in entering them, 22,719–41. Broken sea and obscure approaches to Hartlepool, 22,743–54. Gradual soundings in Hartlepool Bay, 22,755. In fine weather one might feel the way by the lead, 22,758. The danger of entering the Tyne would be lessened if it were deepened to 24 feet at low water, 22,773–75. Prefers Filey for one great harbour, because most vessels collect about Flamborough Head, 22,777–79. After Filey, would like a harbour in the bight of the Tees Bay, 22,783. A harbour at Flamborough Head would save more ships than one in the bight, 22,791. Hartlepool would save more light ships; but more danger to life and property attends laden ones, 22,792–96. Vessels are frequently disabled off Flamborough Head, and a harbour here would be valuable to them, 22,797–99. Colliers are not generally first-class vessels, 22,800. A harbour here would be most effectual in saving life and property, 22,811.

Cuthbert, Samuel, Master. No place between the Humber and Firth of Forth more convenient or safer for a harbour of refuge than Filey, 22,820. Prefers running for Holy Island to taking the ports of the Tyne, Tees, and Wear, 22,822. At Holy Island there is good shelter, but little room, 22,823, 24. Has gone away to Holy Island rather than enter the broken water at Hartlepool, 22,829. If the entrance of the Tees were improved by piers, would still object to it, unless the current was turned another way, 22,834. Great danger in taking any pier harbour, 22,836. Would have a second harbour at Redcar, 22,853. Recommends a harbour in any part of Tees Bay before the Wear and Tyne, 22,856. If the Tyne were deepened it would be no safer than it is now, 22,857. There is much more danger in laden than in light vessels, 22,859, 60. Two entrances to a harbour would let in more swell, 22,864. 400 feet between piers would be safe for taking with a laden collier, 22,867. In a place like Filey, six fathoms would be sufficient depth for the heaviest collier, 22,870. There would be broken water at Hartlepool if the piers were in five fathoms water, 22,872. At Redcar there would be deep water close to the piers, while at Hartlepool there would be shoal water a long way, 22,882. Where one ship has been lost by keeping the sea, three or four have been wrecked by bearing up for harbours, 22,884. Instructs his shipmasters to keep off the land, and avoid tidal and bar harbours; such instructions do not apply to roadsteads, 22,885–93.

Andrews, John, Shipping Agent. A harbour here would be the greatest boon to the merchant service on the north-east coast, 22,917–20. Another harbour would be

essential if a suitable place could be found, 22,921. Freshets are a great objection in the northern ports, 22,925. Instance of risk in running into Shields, 22,933–46. There is no safe place for a second harbour, 22,955. Would never think of going to Hartlepool with a ship in a gale, 22,956. More casualties occur in running down these deep bays than in keeping the sea, 22,957. Would rather take the Tees than Redcar, 22,968. In a gale, there is more broken water at the Tees than at Hartlepool, 22,973. After Filey, it would be better to improve the northern ports; no money would be well spent in Hartlepool; it silts up, 22,974–81. Prevalent winds on the coast, 22,988–96. In bad weather, always preferred keeping the sea, 23,001–03. The ships lost at Hartlepool were lost by running into disasters, 23,010. The broken water at Hartlepool is nine or ten fathoms, 23,012.

Makinson, Frederick, Pilot. It would be better to have two harbours, one near Flamborough Head, 23,036–38. Prevalent winds on this coast, 23,041–43.

Loudon, John, Shipmaster. A harbour of refuge is particularly desirable, and Filey, being central between Firth of Forth and the Humber, is the best spot, 23,056. After Filey, would prefer Hartlepool, because there is no strong tide there, 23,057, 58. After rain, there is danger from freshets at the Tyne, 23,060.

Dodds, William, Shipmaster. Would like a harbour of refuge at Filey Bay, 23,067–69. Would prefer running ashore here to going to the Firth of Forth, 23,070. After Filey, would improve the harbours of the Tyne, Tees, and Wear, 23,071. Disapproves of a harbour at the bottom of Tees Bay, 23,072. With the present harbours would prefer keeping at sea, but if there was a good harbour would take shelter there, 23,074–77. Harbours of refuge should be constructed so that vessels could get out easily, 23,078, 79. There would never be swell enough to prevent a vessel getting out here, 23,083. Harbours of refuge are required specially for laden ships, for which there is the most danger, 23,084, 85. There is no safety in Bridlington Bay, 23,087. Filey Bay is almost universally known, 23,088. Cannot point out how Bridlington Bay could be improved, 23,097, 98. A light ship could always work out of Filey, 23,101. No refuge in Tees Bay, the sea breaks so far off, 23,112. All vessels would avail themselves of a harbour on this side Flamborough Head, especially laden ones, 23,120, 21. There is plenty of room to work out of Filey Bay, 23,126.

Elders, Richard, Shipmaster. Concurs with previous witness, 23,133. Filey is a more desirable place for a harbour of refuge than any in the north, 23,140. Good holding ground in the bight of the Spitals, 23,147. Were but one harbour made, would have it at Filey, 23,150. A harbour here would save more life and property than one at Hartlepool, 23,151–53.

Skerry, James, Master. Prefers Wick to Peterhead for a harbour of refuge, 23,173–82. On this coast a harbour of refuge at Filey would save lives and property, 23,183–85. Doubts whether the Tyne, Tees, and Wear could be made safe, 23,186, 87. Shields Harbour is very dangerous to take, 23,188. Prefers Wick because it is down in a bight; Filey because it is close to a promontory; reasons, 23,194–96, 23,203, 04. Long Hope has a fine anchorage, but dangerous to reach, 23,197–99. With a strong flood tide and a south-south-east gale, not one ship in a hundred would live in the Pentland Firth, 23,201. If a second harbour were constructed, prefers Redcar to Hartlepool, 23,205, 06. More water at Redcar, and no danger of the harbour silting up, 23,207. There is a heavier sea approaching Tees Bay than any other part of the coast, 23,211. Advantage of Wick in certain cases, 23,212–18. Scrabster Roads is almost a harbour of refuge with certain winds, 23,219.

Ruddock, John, Shipmaster. Filey is the best place on the east coast of England for a harbour of refuge, 23,241, 49. Prevalent winds here, 23,246. It would be better to have another harbour; Redcar in preference to Hartlepool, 23,255–57. Disadvantages of Hartlepool; advantages of Redcar, 23,258, 59.

Richardson, Thomas, Shipmaster. Filey Bay is the best place for a harbour of refuge, 23,275. His vessels have driven up and down 10 days for want of sufficient water at the Tyne, 23,278–80. Hartlepool is worse still, 23,281. Would improve the Tyne, Tees, and Wear, 23,282. Tees Bay is an unsafe place, 23,283–85. Considers it unsafe to run for the Tyne or Shields with an ebb tide, 23,296–300. Were a second harbour made would prefer it at Redcar; there is more water than at Hartlepool, 23,301, 02. Laden vessels should be provided for; there is not so much danger in light, 23,304–06. If the Tyne were deepened to 15 feet at low water it would be a good harbour for light vessels, 23,307. Would rather bear up for the Forth than take the Tyne with the ebb tide, 23,310, 11. A harbour at Hartlepool would be acceptable to vessels embayed, 23,321, 22. To vessels embayed in Tees Bay a harbour of refuge at Filey would be useless, 23,324. Filey would take ten to one more vessels than a harbour in the depth of the bay, 23,327.

Richardson, George, Master. Filey is decidedly the best place for a harbour of refuge, 23,334. After Filey there should be a harbour in the Tees about Redcar, 23,340.

White, Richard, Coastguard Officer. Agrees in the opinion that Filey is the best place for a harbour of refuge, 23,351. There is excellent holding ground in the bight, 23,361. If there is to be a second harbour, would recommend Redcar in preference to improving the three existing harbours, 23,367–69. A harbour at Filey would be the means of saving many lives, particularly in laden ships, 23,371, 72. Life-boat at Filey, 23,379–86.

FISHCROFT, THOMAS. *See* BRIDLINGTON.

FISHER, SIMON. *See* HARTLEPOOL.

FOSTER, ROBERT. *See* WHITBY.

FOWLER, JOHN. *See* REDCAR.

FRANCIS, GEORGE GRANT. *See* LONDON. SWANSEA.

FRASER, —. *See* PORTRUSH.

FRASER, JOHN. *See* REDCAR.

FRASERBURGH (Witnesses examined at):

Chalmers, Lewis, Chairman of Harbour Commissioners, &c. States the statistics of Fraserburgh; its position is peculiarly favourable for a great national harbour of refuge; quotes passages from government documents in its favour; facilities for the erection of a harbour; the new north harbour is now well on to completion, but will never be perfect till the outer breakwater be continued to the outer Bush, 564.

Abernethy, James, Civil Engineer. A great national harbour on the north-east coast of Scotland not necessary, 576, 577. Fraserburgh Pier might be extended for a smaller sum than that of Peterhead, 578. The existing harbours should be improved, 579. Running into Peterhead in a south-easterly gale would be attended with extreme risk, even if a harbour of refuge were constructed, 590. Proposed plan for the improvement of Fraserburgh Harbour, 593–603. If a great national harbour of refuge were formed, would prefer Fraserburgh to Peterhead, 609.

Dalrymple, John, retired Master Mariner. Statement of points peculiarly favourable to the Bay of Fraserburgh, 653. Harbours of refuge are very much wanted on the coast, 668. Were one great national harbour made it should be at Fraserburgh, 686. Would undoubtedly prefer Fraserburgh to Wick or Peterhead, 690. The beacon on Cairnbulg Head might have been further out and higher, 699. Would not voluntarily run for Longhope in thick weather, 704–715. Would have no hesitation in running for Longhope in fair weather, but not in thick weather, 704–716. In thick weather would run for Longhope in preference to Wick, even if the piers were carried out much farther, 717, 718. Would run for a harbour at Fraserburgh in preference to Wick, 719, 720. The proposed opening between Cairnbulg Biggs and the ends of the pier, 1¼ mile, 721. More likely to save a vessel at Fraserburgh than Wick, with a favourable wind at both places, 725, 726. In thick weather, at an equal distance from Peterhead and Fraserburgh, would prefer the latter with the harbour proposed by Mr. Abernethy; would prefer it also to Pentland Firth and Longhope, 744, 745. Fraserburgh would be a good look-out in time of war; there is a longer view from Kinnaird's Head than any other part of the coast, 746.

Stephen, John, Master Mariner. A harbour of refuge ought to be erected in Fraserburgh Bay, 762. Many vessels congregate about the bay, 764–767. During the most dangerous gales Fraserburgh Harbour would be safer than the others, 773, 774. Vessels bound to Peterhead are occasionally driven to Fraserburgh, 776. Little good would be effected by Mr. Stevenson's breakwater, 779. Vessels from the Baltic bound to Moray Firth and the west would come to the Caledonian Canal by Kinnaird's Head, 782. Preference is given by continental merchants for ships to go to the Moray Firth by way of the Caledonian Canal, 783. Disabled ships from the North Sea would reach Fraserburgh in almost any gale if the breakwater were made, 784. There is no argument for a great harbour at Wick, but the present harbour there should be improved, 785,

786. The principal anchorage at Peterhead is in the mouth of the harbour, where it is most exposed, 790–792. With a chart would not hesitate to run for Longhope in clear weather, 797. Very good anchorage at Longhope, 805. Anchorage good at St. Margaret's Hope, but it is a small place, 809. Prefers a harbour of refuge at Fraserburgh to Wick, 822. No man would run down on the coast of Wick, even were a harbour erected, 823. Objects to harbours of refuge on dead lands; they should be on a promontory, or close to a headland, 824, 825. More chance of saving life at Fraserburgh; it is a clean bay, without rocks, 826–834. Smooth water would result from an extension of the breakwater, 830. Has often experienced the want of a harbour on this coast, 835. Pentland Firth and Longhope preferable even in thick weather to Wick, 840.

Reid, John, Lighthouse Keeper. The strong reach of the tide at Great Ness is the cause of the smooth water inside, 853, 854. Has observed the same effect at Fraserburgh, 855. The sea is much heavier in Peterhead Bay than in Fraserburgh Bay, 860, 861. Vessels putting into Peterhead in a gale frequently obliged to turn out again, 862. This could not occur at Fraserburgh, 864. It would be very difficult to erect a pier at Peterhead that would stand, 879. Wick needs a harbour, but there is danger of its being filled up with sand, 880. Fraserburgh Bay would be rendered more valuable by a breakwater, such as Mr. Abernethy's; it would prevent vessels being blown to sea, 893–897. Many vessels and lives might have been saved by a harbour at Fraserburgh, 898–910.

Stephen, William, Fisherman and Seaman. There is good anchorage in Fraserburgh Bay, 935–937. If the breakwater at Fraserburgh were carried out a quarter of a mile it would form a good refuge, 939. Were a harbour constructed at Wick vessels would not run to it in bad weather, 943. During a great storm the boats that attempted to gain Peterhead were lost, while those that made for Fraserburgh were saved, 956. Reasons against a harbour of refuge at Peterhead, 963–969. Prefers Fraserburgh, 991. In coming from the Baltic the land about Fraserburgh is a good land-fall, 1013. Fishing boats at Wick greatly need protection, 1021. Sinclair Bay is the only other place near that would afford protection, 1022. The new breakwater at Wick is blocked up with sand, 1023. With the wind at south-east the risk of life in going out is greater at Fraserburgh than at Wick, 1033. Fraserburgh Bay more favourable for fishermen than Wick, 1040. Wick is more resorted to than Fraserburgh, because it has been of longer standing, 1048.

Burnett, William, Seaman. Would erect a harbour at Fraserburgh in preference to Wick or Peterhead, 1065. A prudent man would never run to Peterhead if he could clear Rattray Head or the Buchan Ness, 1067. Would run for Fraserburgh in preference, 1133–1141. Mr. Stevenson's plan would not shelter vessels in gales from the south-east, 1069. The tides so heavy near Peterhead that vessels would be sent round to Fraserburgh, 1072. A harbour of refuge should be erected at the place which could be made with most safety in the prevailing gales, 1084. A harbour at Peterhead would be useless, 1086. One pier carried out here would afford a good refuge in any gale, 1087, 1088. A harbour at Wick would be serviceable for small ships, but not for the regular trade, 1089, 1090. A harbour of refuge here would have saved some wrecks about Lossiemouth and Peterhead, 1099. Wick more resorted to than Fraserburgh, because there are more curers there, and the new harbour has not been tried sufficiently, 1100–1102. In bad weather there is little difference in gaining either Wick or Fraserburgh, 1107, 1108. Even with the proposed breakwater at Wick, Fraserburgh would be a better harbour for fishermen in bad weather, 1111, 1112. The expected increase in the fishing trade at Fraserburgh would be greater if a better harbour were made, 1115–1117. Would come to Fraserburgh instead of Moray Firth if there were a harbour, 1129. We can save lives here, which we cannot do at Peterhead, 1142. Fraserburgh can be taken when Peterhead cannot, 1144. Fraserburgh would do for the fishing boats as well as any other, 1151. The sea heavier at Peterhead in a south-east gale than at Fraserburgh in a north-east gale, 1152. Width of proposed harbour at Fraserburgh an inducement to run for it in preference to Peterhead, with its rocky coast, 1159, 1160. There is smooth water at the mouth of the breakwater, 1161.

Stephen, Alexander, Master Mariner. Prefers Fraserburgh for a great national harbour of refuge; it is naturally protected from prevailing winds, 1171–1173. The anchorage ground at Peterhead is left open to the sea, 1183. Would not make Peterhead Bay with confidence in a south-west gale, 1188. Fraserburgh could be made in any gale were the proposed breakwater carried out, 1192. And safe anchorage made, 1193. Fraserburgh preferable to Wick or Peterhead for sheltering wind-bound vessels, 1196.

Abernethy, James (recalled). Admitting Fraserburgh to be the best site for a great national harbour, a harbour of refuge should also be provided for the fishing trade at Wick, 1197. Extent of enclosure, and cost of the pier proposed by him, 1198–1205. Doubts if a harbour at Peterhead could be constructed at Mr. Stevenson's estimate, 1206. From its situation a harbour at Peterhead would be more difficult to construct, and expensive, than one at Fraserburgh, 1208. The holding ground at Fraserburgh is better than Peterhead, 1210. Area of proposed plan, 1211–1215.

Gage, W. C. *See* Portrush.

Garrett, Thomas. *See* Douglas.

Garson, John. *See* Liverpool.

Gatherer, George. *See* Peterhead.

Gellings, Robert. *See* Douglas.

Gerr, Joseph Webb. *See* Redcar.

Gettings, —. *See* Cardiff.

Gibbons, Barry Duncan. *See* Portrush.

Gibson, George. *See* Peterhead.

Gibson, John. *See* London.

Gillespie, John. *See* Londonderry.

Gill, Henry. *See* Douglas.

Gill, John. *See* Doulas.

Gilmour, Allan. *See* Glasgow.

Gilmour, John. *See* Bristol.

Glasgow (Witnesses examined at):

Gilmour, Allan, Merchant and Shipowner. Harbours of refuge are not required, nor is any improvement needed in the harbours of Carlingford or Wexford, or the construction of one at Portrush or the Isle of Man, 3420–3425. Harbours of refuge, marked as such, cause loss of life and property, rather than prevent it, 3428–3433. There are sufficient harbours if they were kept in proper order, 3447. A place giving shelter at all times without risk might be desirable, 3449. Has numbers of heavily-laden ships passing through the Pentland Firth, and never lost one of them, 3454. Ships should be sent to sea fit to meet a gale without seeking protection, 3464. The formation of harbours of refuge would induce owners to send ships to sea in a more unseaworthy condition than they do at present, 3472, 3473. Many wrecks are caused by the unskilfulness and inebriety of seamen. Numbers of men sail under false names, 3476–3479. Desertion of seamen; mercantile marine law defective; suggestions for its improvement, 3474–3489. Witness has lost 20,000l. since 1852 by desertion of seamen alone, 3491. Registration of seamen suggested as a remedy; believes, though this would raise wages, it would work well and be an eventual saving, 3496–3498. The only benefit from the Mercantile Marine Act is the examination of masters and officers, 3499. Shipping offices have not tended to elevate the character of seamen, but the reverse, 3505. Reasons for the adoption of his system of registration, 3511. It would lessen the number of wrecks, 3512. Laws should be more stringent, compelling seamen to keep their engagements, 3516. Colonial shipbuilders should be made to import seamen, 3518–3520.

Allan, John, Merchant and Shipowner. There is no need of a harbour of refuge at Portrush, Carlingford, Waterford, Isle of Man, or St. Ives, for Clyde shipping, 3531–3535. A ship had better keep at sea than run for a harbour of refuge. Agrees generally with Mr. Gilmour's evidence, 3536–3538. A harbour might be serviceable on the east coast of Scotland for fishing vessels, 3539, 3543. Many wrecks caused by drunkenness and inefficiency of crews, 3551–3558. There is no necessity for the construction of harbours of refuge; enough already. Does not object to one on the east coast of Scotland, 3562, 3563. Agrees with Mr. Gilmour's plan of registration, 3570. And with his remarks on shipping offices, 3572–3575. Trouble arising from the drunkenness of seamen, 3577, 3578. Shipping-masters should have more stringent powers,

3579–3583. An alteration in the machinery of the shipping offices, as suggested, would lessen the number of wrecks, 3586.

Tennant, Hugh, Brewer. Accustomed to yachting for 25 years, 3589. Harbours of refuge desirable; one at Wick would be more generally useful than at Peterhead or Fraserburgh, 3592, 3603. A harbour for large ships desirable at Ramsay, Isle of Man, 3598. Thinks harbours of refuge would tend to lower marine insurance, and thereby enable owners to pay a small tax for their benefit, 3609.

Cameron, John, Steam Packet Agent. A harbour of refuge at Portrush would be invaluable, 3619–3632. Portrush would be preferable to Loughindall, 3646–3650.

Crawford, Capt. *T.* Wick the most favourable place for a harbour of refuge, 3669–3671, 3757. None is necessary on the north-east coast of Ireland, 3673. One is needed at Douglas, in the Isle of Man, 3675. An improvement of Carlingford, Waterford, and Wexford would be of great advantage, and national funds would be well expended for such purposes, 3677, 3678. Lough Swilly is the easiest place to run to on the north coast of Ireland, 3681. It would be useless to expend much on Portrush, 3689. Shipowners as a body would not object to pay passing tolls for harbours of refuge, 3698. Harbour necessary on north-east coast of England; Hartlepool an eligible spot; Filey preferable to Scarborough, 3704–3706. One needed at Isle of Man, 3710–3713. Wrecks caused by crews going on board drunk; remedy suggested, 3714–3719. Filey is the best place on the north-east coast for a harbour of refuge, 3722, 3744, 3754. Once wrecked at Hartlepool; a harbour at Filey would have saved him, 3724. Wrecks at Tees Bay might be prevented by harbour at Filey, 3730. Bight of a bay is the best place for a harbour, 3731. Vessels delayed at Douglas owing to condition; a harbour at Douglas should be capable of receiving all classes of vessels, 3738. Delays and consequent dangers at Flamborough Head, 3739–3742. A harbour at Wick would be of great service, chiefly to the fishing boats and coasters, 3745–3747.

Goodwin, Capt. *John.* Harbour of refuge at Wick would be of great advantage, 3764–3766. The Skerries form a natural harbour; good anchorage; sufficient water for the largest ships; it would be desirable to make it a complete harbour, 3767–3774. Harbour at Filey Bay would be useful, 3780. Less danger in Pentland Firth in a gale than with no wind, 3791. A harbour at the Skerries more desirable than at the Isle of Man, 3793. One at Douglas would be desirable, 3799. Carlingford Harbour should be improved, 3802. Loughindall a bad place; bad anchorage; adverse tides, 3804–3817. Skerries is the best position for a harbour, 3822. Good anchorage there, 3826.

Turner, Angus, Town Clerk. Suggests witnesses for examination interested in the coasting trade, 3832.

Main, Capt. *Hugh.* Ramsay Bay a very suitable place for a harbour of refuge, 3842–3847. Never had to complain of drunkenness with his crews, 3863, 3864. Advantages of a harbour at Ramsay Bay, 3865–3879.

Kelso, Capt. *John.* Necessity for a harbour of refuge on north-east coast of Scotland; it should be at Wick or Sinclair's Bay, 3887–3892, 3901–3909, 4101, 4102, 4136–4140. One needed at Isle of Man,—at Langness Point, 3893–3896, 3911, 4107. No necessity for a harbour on the Irish coast, 3897. Waterford Harbour much needs improving, 3898, 3899, 4103. Harbour needed at Land's End; Mount's Bay an eligible spot, 3900, 4104. Pentland Firth is a dangerous passage, 3901–3907. Ramsay Bay better for a harbour than Douglas, 3914. Loughindall the best place for one in the North Channel; good anchorage; depth of water, 3915–3922. Harbours of Carlingford and Waterford should be improved, 4111–4113. A harbour at Galway would be desirable, 4120. Good anchorage, but heavy sea, at Loughindall, 4124. Good harbour might be made at Church Bay; but not so much required there, 4129. A harbour on the Highland side would be more beneficial than on the Irish coast, 4132. Waterford is preferable to Wexford, 4134.

Dreghorn, David, Town Councillor. Represents opinions of Society for Vindication of Scottish Rights, 3932. A harbour of refuge on the east coast of Scotland would tend greatly to the preservation of life and property, 3933. Breakwater at Lamsath Bay would form a good harbour; a harbour at Loughindall would be of advantage, 3934–3936.

Turnbull, Capt. *James.* Ramsay Bay the best place for a harbour of refuge in the Isle of Man, 3947. Portrush Skerries a good locality for one, 3952, 3966–3968. Dangerous banks opposite Liverpool; are the causes of wrecks there; never knew of ships leaving port with drunken crews, 3958–3960.

Mitchell, John, Merchant and Shipowner. More harbours of refuge required; would reduce maritime insurance; one needed on north-east coast of Scotland; the existing harbours on the west coast should be buoyed, 3972–3980. A harbour is required in the vicinity of Portrush, 3981, 3997. The harbours on the Irish coast should be improved, 3985. Harbours of refuge along the coast would diminish insurance; would not object to a passing toll, 3994–3996. Douglas the best place for one in Isle of Man, 4000. Existing harbours should be improved, 4003, 4006. Want of harbours of refuge and drunkenness of crews causes of a large proportion of wrecks, 4009–4013. Disagrees with Mr. Gilmour's evidence, 4015. Thinks the shipping interest would be willing to pay half the cost of constructing harbours, 4018, 4019, 4050, 4051, 4056. Only those ships using harbours should pay toll; this would not deter captains from using them, 4018–4022. Harbours of refuge are necessary as a means of saving life and property, 4029. Vessels passing through Pentland Firth in winter pay double insurance; many wrecks there, 4033–4040, 4062–4068. Entrance to the Clyde should be buoyed, 4042.

Smith, George, Shipowner, &c. No harbour of refuge necessary on west coast of Scotland, 4074, 4079. Nor at Portrush Skerries, 4075. One is requisite on the north-east coast of Scotland, especially near Wick, for the fishery, 4078, 4082. Masters of coasters are so intimate with the west coast that few wrecks occur, 4083. A passing toll would be the best means of levying a moiety of the amount expended in constructing harbours of refuge, 4087. Crews are frequently drunk on leaving port; shipping offices have not improved this; desertions and fictitious names facilitated by want of registration, 4088–4095.

Johnstone, Capt. *J.,* Harbour-master. A harbour in Ramsay Bay would be advantageous for all vessels, 4148–4152. Entrance to the Clyde is properly buoyed and lighted, 4158–4162.

Clanston, Bailie, Underwriter. Harbours of refuge would not much lessen the rates of insurance; there is an increase on insurance on vessels passing through Pentland Firth in winter, 4168. Wrecks result from intoxication of crews, 4171.

GLOVER, REV. FRED. *See* LONDON.

GOODWIN, JOHN. *See* GLASGOW.

GRANT, JAMES. *See* PETERHEAD.

GRAVEL, JOHN. *See* HULL.

GRAVES, SAMUEL ROBERT. *See* LIVERPOOL.

GRAY, DAVID. *See* PETERHEAD.

GRAY, JOHN. *See* SUNDERLAND.

GRAY, WILLIAM. *See* NORTH SHIELDS.

GREENHOW, CONRAD. *See* NORTH SHIELDS.

GUDWOOD, JAMES. *See* WHITBY.

GUNN, DONALD. *See* WICK.

HAISMAN, ABEL. *See* HARTLEPOOL.

HALL, JAMES. *See* BRISTOL.

HALLIDAY, DAVID PALMER. *See* HULL.

HAMPTON, GEORGE. *See* LONDON.

HARRISON, THOMAS ELLIOT. *See* WHITBY.

HARTLEPOOL (Witnesses examined at):

Jackson, Ralph Ward, Shipowner, and Port and Harbour Commissioner. Statistics of the port and trade of Hartlepool, 16,464–69. Wrecks and loss of life in Hartlepool Bay, 16,469–77. Number of vessels taking refuge at Hartlepool, 16,481. Plans for making Hartlepool a sheltered anchorage, 16,482. Improved class of ships now frequenting Hartlepool Harbour; accommodation for 1,000 ships in the two ports; steam tugs, 16,483, 84. Dock accommodation, 16,506–12. A harbour at Hartlepool would have saved a large number of vessels lost between Flamborough Head and Whitby in January 1857, 16,519–32. Extent, cost, and enclosed area of proposed breakwater, 16,533–49. Mr. Rendel's plan for breakwater, 16,569–73. Number of vessels wrecked and lives lost in Hartlepool Bay in 12 years; number of lives saved by life-boats, 16,587–93, 16,603. A harbour of refuge should be in the best place for catching embayed vessels; Tees Bay is in that position, 16,597–600. Advantages of Hartlepool and consequent increase of traffic; superior dock accommodation, 16,604–9. A harbour at Hartlepool should be capable of accommodating 500 to 700 vessels, 16,610. Steam tugs are available, but the necessity for them is less than in the Tyne, 16,613,14. Doubtful advantage to

the collier trade of a harbour south of Hartlepool, 16,615–23. Channel into west harbour formed chiefly by dredging; temporary silting up of the bay; southern part of bay is deepened; denies that foreign matter is continually dredged out of tidal basin; bay would silt up if enclosed, 16,644–67. The filling up in Victoria Dock is caused by coal lost in shipment, not by silt, 16,668. A breakwater will not cause deposit in the inner bay; there is no appreciable deposit in the bay, 16,669, 70. The mean area between 5 and 3 fathoms is about 870 acres, 16,672. Sluicing only carries out the sand brought in, 16,676–80. A breakwater is preferable to a close harbour, 16,681, 82. No sand or silt would come in with 8 or 9 fathoms water, 16,685. Material, &c. of proposed breakwater, 16,688–97. Set of the Tees causes no deposit near the Long Scar; dredging at West Hartlepool recently has been chiefly of clay, 16,706, 07. There is no silting up in the harbour, and no deposit along the coast, 16,709-12. South-east gales bring in charged water which north-east gales take away again 16,717. If a harbour of refuge be constructed there will be no difficulty in getting in, 16,719–21. Proposed breakwater would give smooth water and protection from every wind, and would not cause silting up, 16,723–30. Harbour of refuge is really called for on this coast to save life and property, 16,735–38. Proposed breakwater could be made on a reduced scale, and give proportionate shelter, 16,739. Advantages of Hartlepool over Filey, 16,742, 43, 47. Hartlepool is sufficient for all the vessels which collect at Flamborough Head; local funds would be forthcoming, but not sufficient, 16,748–50. Details of another proposition for a pier and breakwater, to form a seven-fathom harbour, with remarks on the different plans, 17,024–59. But for the safety of life and property the minimum should be the plan of Mr. Rendel, 17,060. Average trade would require a depth of four fathoms, 17,078–80. Mr. Rendel's plan was not fully carried out for want of funds; endeavours to raise the money were suspended until the result of this commission was known, 17,092–101. If Mr. Rendel's plan were carried out, it would be a very valuable harbour of refuge, 17,114, 15. Proposed piers would prevent sand coming into the bay, 17,116-21. Tolls levied; vessels coming in for refuge pay four times as much as for trading purposes; proportion of vessels using the port for either of these purposes, 17,122-35. Explanation of apparent discrepancies between Mr. Rendel's and witness's plans, 17,140–48. Breakwater can be constructed cheaper now than in Mr. Rendel's time, material has been found nearer, 17,149–53. Explanations as to lists of wrecks, 18,131–50.

Mossman, William Ogilvie, Haven-master. Necessity there is for a harbour of refuge; if but one, it should be at the bottom of the bay, 16,803, 16,813–19. There is no silting up in the bay, 16,804–12. Would go into a harbour rather than keep the sea; wrecks are caused by vessels being ill found; more light than laden vessels wrecked, 16,821–27. Not much danger from collisions, 16,828–31. A harbour at Wick desirable, but not at Peterhead, 16,832–39. Little capability for a harbour at Redcar, 16,840–45. Hartlepool is the best site for a harbour if only one be made; there should be three between Flamborough Head and the Staples Islands, 16,847–52. A river coming out renders a place unfit for a harbour of refuge, 16,853. Hartlepool preferable to Sunderland; there would be no silting up, 16,856–60. Four harbours on this coast would be injurious; one large one would do more to save life and property, 16,877–86. Difference between soundings of 1838 and 1846; the three-fathom line has progressed slightly seaward, but physical workings show a tendency to deepening, 16,887–917. Disagrees with many observations in Mr. Calver's report, 16,925. Half a million cubic yards of substance are gone since 1846, 16,929. The deposit in Victoria Dock is entirely coal-dust blown in, 16,934. Hartlepool decidedly the best site for a harbour of refuge; ships for Wear and Tyne would gladly take it; better make it a close tidal harbour than a mere sheltered roadstead; the entrance should be 1,000 feet wide, and in the centre, 16,935–44. Mr. Rendel's design does not enclose area enough nor go into sufficiently deep water, 16,946, 47. Witness submits his scheme, 16,948–52. Produces a diagram of positions of ships leaving the coal ports; the number of vessels stated to be seen off Flamborough Head is much exaggerated; Filey Bay a good shipping place, but not for a harbour of refuge, 16,953–59. Would make a harbour at Wick, and a secondary one at Peterhead; Wick Bay would not silt up, 16,960–69. Dangers of Pentland Firth, 16,970–73. Dangers off north-east coast of Scotland do not warrant an outlay of public money for a harbour of refuge, 16,969. The vessels lost in gale of January 1857 might have been saved by a harbour at Hartlepool; doubtful if a harbour at Filey would have saved them, 16,987–91. Hartlepool is better for leaving than Filey, 16,982–17,003. Harbour should be more for laden than light ships, 17,004–07. Entrance of a tidal river should not be enclosed as a harbour of refuge, 17,008. Inapplicability of the Tyne as a harbour of refuge, 17,009–15. Many collisions might be avoided by steamers keeping a better look-out, 17,020, 21. Navigation of the Pentland Firth, 17,279–93. A close harbour would require one acre for each vessel; with an open harbour, three, 17,298–300. Mr. Rendel's harbour of insufficient depth, and too small for a harbour of refuge, 17,301–05. Objects to Mr. Jackson's piers, 17,306–07. The average depth of Hartlepool Bay has increased since 1846, 17,308. The southern breakwater would prevent sand drifting to the entrance of the harbour, 17,312. Never doubted the bay silting up from the north; detached piers will help to fill the bay, 17,313. Half a million cubic yards of substance have been lost since 1846, 17,315. A harbour with two entrances would be injurious, 17,317–24. Were a breakwater constructed round the outer part of the bay it would cause a scour, 17,326. Deflection of waves, 17,328–33. Has found five knots current without the influence of a fresh in the Tyne, 17,344, 45. Many vessels are driven ashore through taking the Tyne on an ebb tide, 17,346. Course of the Tyne with and without freshes, 17,347–60. If the close harbour be abandoned, two entrances should be in the outer wall, 17,363. The piers at Hartlepool Bay should interfere as little as possible with the set of the stream, 17,367. An entrance should not be in an angle of two piers, 17,368. With his proposed harbour, ships might be loaded at the outer piers, and trade would be increased, 17,374, 75. The two openings in the eastern pier should be 800 feet wide, 17,376.

Johnson, James. Gives in extracts as to vessels taking refuge, 17,154.

Calver, E. K. The three-fathom line in Hartlepool Bay has in one part extended 900 feet to seaward in 12 years, which shows a silting up, 17,160–63. In 1846 the bay had silted up over two-thirds of its extent from ½ to 2½ feet; other parts had deepened to a like extent; bar and channel improved by sluicing, 17,164–68. Quite probable, as stated by Mr. Mossman, that silting up ceased in 1846, and that the bay increased in depth from 1846 to 1856, 17,169–73. Probable causes of such increase of depth, 17,174–80. Lives lost in gale of January 1857 between Robin Hood's Bay and North Sunderland Point would have been saved by a harbour at Hartlepool; reasons for this opinion, 17,181–98. Silting up in bay might have been caused by clearing out of Tees; if north breakwater prevented accumulation at north head, it would reduce tendency of tidal water to silt up; no danger of long piers silting up, 17,204–14. No silt on outside of breakwater already built, 17,216. The silt in Victoria Basin results from the sea water; water in this bay does deposit sediment, 17,227, 28. Vessels off Flamborough Head would take refuge at Hartlepool or Filey, according to circumstances, supposing there were a harbour at both places, 17,233–45. Winds prevailing much in one direction sometimes for years, and then in another, would account for shoaling, and afterwards deepening of sea, 12,246, 47. Hartlepool preferable to Filey for vessels which could not pass Flamborough Head, 17,248. Freshes down the Tyne and the Tees increase the danger of entering, 17,249–56. Adheres to opinions given before Committee of House of Commons of 1857:—Hartlepool the best site for a breakwater, which should be open at both ends to maintain the current, &c.; Redcar and Sunderland inferior positions to Hartlepool for a harbour, 17,257–73. In tidal rivers on this coast, no outlay Government could make would insure the necessary depth within the piers, 17,274.

Russell, Robert, Manager under Wreck Committee at Lloyd's. The necessity for a harbour of refuge cannot be denied; it ought to be formed in Hartlepool Bay, 17,387, 88. As a matter of refuge, would prefer one good harbour here to two or three small ones elsewhere, 17,400–3. A harbour for vessels drawing 16 feet would suit nine-tenths of the trade of this coast, 17,404, 5. Colliers most want harbours of refuge, 17,406, 8. Larger proportion of badly found and laden colliers than of other vessels; the practice of grounding them does them no good; the

crews are over-worked, 17,407–16. Harbours about the coast would be advantageous, 17,417, 18. If the existing harbours of the Tyne, Wear, and Tees could be made accessible at all times of the tide, it would be better than having one great harbour, 17,419–24. Would not risk money on doubtful improvements, 17,425. Between the coal ports and London would prefer two moderate harbours to one large one, 17,426, 27. Hartlepool and Filey the best places this side Flamborough Head, 17,430. Owners would save by their ships going into harbour instead of knocking about, 17,432. Currents in the Tyne and Tees are greatly increased by freshes, 17,433–35. If only one site was selected it should be Hartlepool, 17,436, 37.

Fisher, Simon, Shipmaster. A harbour of refuge should be made in Hartlepool Bay; reasons, 17,445–50. Would not object to one at Filey, if there were resources, 17,463. Were there two millions of money to spend, would devote it to a harbour of refuge at Hartlepool, 17,474, 75, 17,539. A harbour of refuge is necessary between Aberdeen and the Pentland Firth; Wick decidedly the best place, 17,477–79. Long Hope is an excellent harbour, 17,480. Danger of attempting to stem the tide in the Pentland Firth, 17,486–96, 17,523. A harbour on the east side of the Pentland Firth would be as available as Scrabster Roads; it would be valuable for the eastward trade, 17,502, 3. Prefers Wick to Peterhead, 17,515–21. A harbour at Hartlepool would save twenty ships to less than ten at Filey, 17,525. Hartlepool is good land to make, with good soundings, 17,526, 33. A harbour of refuge on this coast should hold 500 or 600 sail, 17,535. A bar always goes to seaward with the extension of the piers, 17,541, 42. The entrance of the harbour at Aberdeen could not be improved, 17,544. A harbour at Filey would save life and property, 17,546, 47. If there were a harbour of refuge here ships would press on to obtain it, 17,548.

Hutchinson, William, Contractor. Observations and technical explanations on Mr. Jackson's schemes for breakwaters and piers, 17,552–624. Would complete the proposed works at Hartlepool in less time than those at Alderney were constructed, 17,637–47. Will construct this work at 129*l.* per yard cheaper than Alderney, 17,661. And perform three times the amount of work in half the time, 17,665–69. Quarry, and material and prices, 17,678–96.

Menzies, John, Pilot. The more harbours of refuge the better, but doubts the proposed improvements at the Tyne, Tees, and Wear being carried out, 17,706. I, they could, would prefer that plan to one large harbour 17,708, 9. Prefers Hartlepool to neighbourhood of Flamborough Head for one large harbour, 17,710, 11. Hartlepool is easy to be found by the lead; the soundings increase from the northward as you get to Hartlepool, 17,716–36. Can tell by sounding when drawing off Hartlepool much easier than off Flamborough Head, 17,736. Soundings at the Tyne irregular, 17,738, 39. Guided only by the soundings, can run safer for Hartlepool than the Tyne, 17,740, 41. If one great harbour were constructed, would prefer it at Hartlepool, 17,746. A harbour at both Hartlepool and Filey would be better, 17,747, 84. If a proper harbour were constructed, would prefer Bridlington to Filey, 17,750–64. A breakwater at Bridlington should be erected on the Smithic, 17,770. Filey Bay could not contain half the vessels that Bridlington Bay could, 17,779. A harbour that would take the largest colliers at all hours would be sufficient, 17,782.

Haisman, Abel, Shipowner. Decidedly in favour of one large port, which should be placed in Hartlepool Bay, 17,794–97. Gradual shoaling is the characteristic of Hartlepool Bay, 17,811–15. In the gale of January 1854, many vessels and lives lost might have been saved by a harbour of refuge at Hartlepool, 17,821–23. We are comparatively safe when south of Whitby, and when not embayed, 17,824–26. Prefers one large deep harbour in the bay of the Tees to two smaller ones, 17,836. One at Hartlepool would save ten to one more lives than one at Filey, 17,837. More vessels would try for a harbour at Hartlepool than it would hold, 17,842. Has never seen, by a fourth, so many ships at Flamborough Head as at Tees Bay, 17,844. As many, or more, ships founder in the southern trade as colliers, 17,853–57.

Clark, John, Master. Agrees with previous witnesses as to one large harbour at Hartlepool being preferable to improving the Tyne, Wear, and Tees, 17,870, 71, 17,903. The land at Hartlepool as easy to make as any on the coast, 17,872–79. In thick weather, the soundings will lead almost to Hartlepool Pier, 17,884–91. Runswick Bay would be the best place on the coast for a harbour on a small scale; to be used as a stopping place, not as a shelter, 17,898–902. Little need of a harbour of refuge at Filey, 17,907.

Jordison, Robert, Master. One large harbour more desirable than improving the Tyne, Wear, and Tees; the latter places could not be sufficiently improved, 17,917, 18. Decidedly prefers Wick to Peterhead for making a harbour, 17,931, 32. A harbour of refuge on the east coast of Scotland would save life and property, 17,933–35. A small harbour only might be made at Runswick Bay; vessels rarely resort thither, 17,938–42. If but one harbour of refuge is constructed, Hartlepool is the best site, 17,946. For a second harbour for colliers would select Filey, 17,948. With harbours equally efficient, would prefer one at each place; the two harbours might pick up more light ships, 17,949–53. If there were a harbour at Filey few vessels would run back to Hartlepool, and those unable to weather Whitby would find shelter in Hartlepool, 17,958, 59.

Bayley, Thomas, Shipmaster. Agrees with previous witnesses, 17,968. Was wrecked in Hartlepool Bay in the gale of January 1857, 17,971. Details of the occurrence, 17,972–98. Prefers Hartlepool to Filey as the site for a harbour of refuge, 18,005. Would have one good harbour at Hartlepool in preference to two moderate ones here and at Filey, 18,006, 12. If the two harbours were made, double the number of ships would resort to Hartlepool, 18,013–17. Laden colliers would find benefit from a harbour at Filey, 18,020.

Chadds, Robert, Master. Wrecked at Hartlepool in January 1857, 18,032. Agrees with previous evidence, that one harbour at Hartlepool would be best, 18,038. In the gale of January 1857, many vessels would have been saved had there been a harbour at Filey, 18,054, 55. With harbours that will shelter the largest colliers by night and day, two would be better than one, 18,057.

Shaw, Maltman, Shipowner. The general opinion of shipowners and others is, that Hartlepool would be the best place for a harbour of refuge, 18,062–69. Two harbours of equal capacity better than one to the shipowner; better also for colliers, 18,071, 72. As a rule, colliers are as well found as other coasting vessels, 18,073–81.

Huntley, Robert, Shipowner. Prefers one harbour of refuge in Tees Bay, but would like all the others improved, 18,090–92. A harbour at Hartlepool would diminish the premium paid to underwriters, 18,095. Unanimous opinion of himself, his masters, and a number of persons in the locality and along the coast, that the harbour should be at Hartlepool, 18,098–101. Hartlepool preferred to Filey on account of the greater depth of the bay, 18,102. Although a second harbour at Filey would be serviceable, Hartlepool would save ten to one more, 18,107, 8. Nautical men object to a harbour at Filey on account of the quantity of broken water, 18,112. If a proper harbour could be made at Filey it would be very valuable for vessels caught off Flamborough Head, 18,113.

Bohr, Charles, Shipmaster. The harbour of refuge should be in Tees Bay, 18,121. The captains at Hamburgh are of the same opinion, 18,123–26. Foreign captains consider this part of the coast the most dangerous in England, 18,129.

Stockton, Isaac, Shipmaster. The *William Pitt,* wrecked on 4th January 1857, would not have been saved by a harbour at Hartlepool, 18,151–55.

Smith, Thomas, Shipmaster. Would prefer a harbour of refuge at Hartlepool to improving the Tyne, Wear, and Tees, 18,164. Prefers Hartlepool and Bridlington Bay to Filey, 18,165–68. Would put a breakwater in Bridlington Bay, 18,167. Advantages of Hartlepool, 18,169.

HARVEY, ANDREW. *See* CARDIFF.
HASSARD, —. *See* WATERFORD.
HATRICK, SAMUEL. *See* LONDONDERRY.
HAWKINS, ARTHUR. *See* LIVERPOOL.
HELYER, RICHARD BLAKE. *See* PADSTOW.
HENRY, JOSEPH. *See* SUNDERLAND.
HEPBURN, ALEXANDER. *See* PETERHEAD.
HERITAGE, JAMES. *See* BRIDLINGTON.
HESTEAD, HENRY. *See* REDCAR.
HILL, EDWARD. *See* CARDIFF.
HODGE, WILLIAM. *See* SUNDERLAND.
HOGARTH, WILLIAM. *See* ABERDEEN.
HOGG, JOSEPH. *See* DOUGLAS.
HOOD, WALTER. *See* ABERDEEN.
HOPPER, WILLIAM. *See* BRIDLINGTON.
HORSEWELL, NICHOLAS. *See* PADSTOW.

Hoskyns, Lieut. *See* Douglas. Portrush.

Hudson, Jeremiah. *See* Bridlington.

Hudson, John. *See* Douglas.

Hudson, John. *See* Redcar.

Hudson, Ralph. *See* Sunderland.

Hughes, —. *See* Ardglass.

Hull (Witnesses examined at):

Bruce, Patrick, Secretary of Chamber of Commerce. The Hull Chamber of Commerce have concluded that a harbour of refuge is needed near Flamborough Head, 24,510.

Gravel, John, Shipmaster. A harbour is necessary between the Humber and the Tweed; Filey is the best spot, 24,532–35. Would never run for the Tyne as a harbour, 24,538–40. Nor for Hartlepool, 24,541. Reasons in favour of Filey, and against Bridlington Bay, 24,542–51. Peterhead is the best place for a harbour between the Firths of Forth and Pentland, 24,552–56. Better than Wick, 24,557–59. Not much difficulty in passing through Pentland Firth, 24,561–75, 24,633–38. A harbour of refuge should not be at a port, 24,578–81. Filey preferable to Hartlepool, there being no trade, and because ships off the Head frequently cannot get south, 24,582–86. A harbour is more needed on the coast of England than of Scotland, 24,587–90. Vessels are frequently lost through delay in endeavouring to make a harbour, 24,594–96. A harbour in Hartlepool Bay, as well as one at Filey, would be of use, 24,615–20. If a harbour were made at Hartlepool, a larger class of vessels would trade there, which would fill up the room intended for refuge, 24,625–30. A harbour at Wick would be useful for the fishing boats, 24,662, 63. Filey is the best place for a harbour between St. Abb's Head and the Humber; Tees Bay the next, 24,685–88. Would run for Long Hope in any weather if marks were visible, 24,694.

Farr, Thomas, Shipmaster. Filey Bay is the best place for a harbour between the Humber and the Fern Islands, 24,712. It is needed chiefly for laden vessels, 24,716. Difficulty of rounding Flamborough Head in bad weather with a flood tide, 24,717–21. A harbour at Filey would save many lives and much property, 24,739–42. A harbour in Tees Bay preferable to improving Tyne, Tees, and Wear, 24,753. It would be better at Redcar than at Hartlepool, 24,755, 24,788–94, 24,809–14. Has got into Hartlepool old harbour when in want of refuge, but with considerable damage, 24,760–75. Better make a harbour than lie-to, 24,782–87. A harbour of refuge should not be a port, as trade would obstruct vessels seeking refuge, 24,795–800. Between Flamborough Head and Tynemouth, Filey is the best, and Redcar the next best, place for refuge, 24,817, 18. Filey or Redcar would be of no use to vessels sailing north from the Tyne and Sunderland, 24,840–43. Tees a bad place to take, 24,854. Harbours of refuge are preferable to attempting to improve bar or river harbours, 24,860–63. Vessels are often detained off Flamborough Head from their unseaworthiness, 24,876, 77. A collier making 12 or 13 voyages a year would be detained from proceeding south off Flamborough Head perhaps six times, 24,883, 84. Personal experience and risk in running for Tynemouth and Hartlepool, 24,885–904. Many colliers are badly found; generally leaky; patched up and repaired; but few broken up, 24,905–21.

Maycock, Joseph, Shipmaster. Filey is the best place for a harbour between the Humber and the Farn Islands, 24,928. Would be useful to vessels detained off Flamborough Head, 24,929–32. Prevalent winds on the coast, 24,946–54. Redcar is preferable to Hartlepool for a second harbour, 24,956–58. One harbour at Filey is preferable to improving those existing, 24,960–62. Prefers a harbour without a trade for refuge, 24,964. Many colliers are lost in bad weather from their unseaworthiness, 24,968.

Dawson, Thomas, Shipmaster. Filey is the best place on this coast for a harbour, 24,994. Necessary for vessels unable to round the Head, 24,995–98. Of most use for laden vessels, 25,000. One at Hartlepool would attract light vessels, 25,004. Difficulty of making Hartlepool, 25,012–15. Redcar is preferable to Hartlepool for a second harbour, 25,022. A harbour there is more desirable than the improvement of existing tidal harbours, 25,023–26. It is desirable, if practicable, to improve the entrance to the Tyne, 25,035. If the entrance were widened, believes the bar would follow it, 25,041. A harbour of refuge on this coast should have room for 1,000 sail, 25,057. One for 500 would be sufficient at Filey, 25,063. Difficulty of rounding Flamborough Head, 25,069–75. Danger of broken water at Hartlepool, 25,084–87. It extends two or three miles from mouth in easterly winds, 25,092, 93. Shifting sand to the north of the Tees, 25,099.

Talbot, William, Shipmaster. Between Firths of Pentland and Forth, Fraserburgh or Aberdeen is the best place for a harbour, 25,110–12. Wick needs one for the fishing, but not for the passing trade, 25,113–16. Cromarty or Long Hope would be sufficient for vessels bound south, 25,119–23. Pentland Firth not safe to those unacquainted with it, 25,124–29. Need of a harbour at Fraserburgh; preferable to Wick or Peterhead, 25,130–36. Aberdeen in preference to Peterhead, 25,137. Redcar is the best spot between Flamborough Head and the Farn Islands for a harbour, 25,138–43. Preferable to Filey, 25,144, 45. But one at Filey in addition desirable, as well as deepening of the Tyne, the Tees, and the Wear, 25,146–50. Dangerous winds at Fraserburgh, 25,153–55. Difficulties of the Pentland Firth, 25,158–64. A harbour at Filey would be of little use that would not hold 200 vessels, 25,165.

Porter, James, Shipmaster and Coasting Pilot. Prefers Filey as the place for a harbour of refuge, 25,184. But few vessels can round Flamborough Head in blowing weather; vessels make the passage with offshore winds by keeping close to land, 25,186–95. Dangers from sudden shifts of wind, 25,198–201. A harbour at Filey and another at Redcar would be sufficient, 25,203–09. Dangers of entering Shields, 25,221–17. The outset at Filey would be no hindrance, 25,218–22. Good holding ground, and no change of depth, at Filey, 25,223, 24. Prevalent winds on this coast, 25,229–36. The land would be a guide in thick weather to a harbour at Redcar, 25,240–43.

Oldham, James, Civil Engineer. Facilities for constructing a breakwater at Filey; agrees with Mr. Coode's plan and estimate; there are no engineering difficulties, 25,254. Any other plan to be as efficient would cost more, 25,256. Excellence of material; no need to bring granite from Cornwall, 25,257–61. No place offers equal facilities to Filey, 25,262–70. Filey Bay would not silt up, 25,278–82. Drift from Speeton Rocks, &c., does not accumulate in Filey Bay, 25,286–303.

Bell, John, Mayor of Great Grimsby. Advantages of Great Grimsby as a harbour of refuge, 25,308.

Babb, G., Town Clerk of Grimsby. Reads a statement as to the present advantages of Grimsby as a harbour, port, and government depôt, and desirability of further improvement, 25,310, 25,314–19. Good anchorage between Spurn Point and Grimsby, 25,313.

Brown, William, Ship Broker and Owner. A harbour of refuge is greatly required; the Tyne so improved as to admit ships in all tides would be the best, 25,324–26. Bar should be deepened to 20 feet, 25,333. A harbour necessary also at Filey, 25,343–45. Broken water in Tees Bay, 25,346–49. If but one harbour, it should be near Flamborough Head, 25,352. If the Tyne was deepened, the river might be entered as safely as a non-tidal harbour, 25,353–57. Masters would readily run into tidal harbour if sufficient depth over bar, 25,360–64. Filey preferable to Redcar; its advantages, 25,365. Sufficient refuge already on east coast of Scotland, 25,366–68. Pentland Firth not a dangerous navigation, 25,371–78.

Caird, William, Shipmaster. Need of a harbour near Flamborough Head, 25,388, 89. Danger of attempting bar harbours, particularly with ebb tide, 25,390–93. Advantage of a harbour at Filey, 25,395. Redcar is preferable to Hartlepool, 25,398, 99. A harbour is not needed on the east coast of Scotland, 25,401–04. The worst sea is south of Flamborough Head, 25,408, 09. Colliers in general are indifferently found, 25,426. Some are too bad to be insured in the clubs; seldom any broken up, 25,428–30. Generally they are sufficiently manned, 25,433. Many are lost through exhaustion of crew at the pumps, 25,434, 35. A harbour at Filey would be of great use to these and to the Baltic trade, 25,436–39. Broken water in Tees Bay, 25,456–62. In broken water, the first sea is generally the worst, 25,466–68. Ships are often lost from a master's desire to make his own port, 25,469. A harbour is more needed for laden than light vessels, 25,470–72.

Atkinson, John, Shipmaster. Opinions as to the navigation of the Pentland Firth, 25,488–507. Filey is the best place on this coast for a harbour of refuge, for saving both life and property, 25,509–14. Bar harbours are dangerous, 25,516. There are rather more good vessels than bad in the coal trade, 25,524. A

harbour of refuge is best placed near the greatest danger, *i.e.* Flamborough Head, 25,544–47.

Halliday, David Palmer, Shipmaster. Filey is the most eligible situation for a harbour of refuge, 25,583, 614, Difficulty of working round Flamborough Head, 25,591. Would rather keep at sea than try a bar harbour, 25,596. The greatest number of wrecks take place near the coal ports, 25,602. If a sufficiently large harbour were made at Filey, all the vessels detained off Flamborough Head could get shelter, 25,611. Redcar would do, and is better than Hartlepool, but deepening the coal ports would be preferable to either, 25,615–21. Worse sea at Hartlepool than at Redcar, 25,622–26.

Cooke, Sidney, Pilot. Filey is the most suitable place for a harbour, 25,651, 700. It would be of value for laden vessels leaving the northern ports, 25,654. Broken water at Hartlepool, 25,658–61. Soundings about Hartlepool are not to be trusted, 25,671. Sands End Roads the next best place to Filey for a harbour; good anchorage there, 25,684–87. The vessels driven on shore to north of Huntley Foot are wrecked in attempting to get into harbours, 25,688. Large numbers of vessels driven back northward from Flamborough Head, 25,692. Many of them founder, 25,696.

Elder, Robert, Shipmaster. Long Hope is a good harbour, 25,723, 24. Pentland Firth is dangerous for strangers, 25,726–28. Filey Bay is the best place for a harbour of refuge on this coast, 25,737–39. It is chiefly required for laden colliers, 25,741. Large numbers of northward-bound vessels put into Bridlington Bay, 25,745. Some vessels are lost endeavouring to round the Head at night, 25,751. Use of a harbour at Redcar, 25,755. Difficulty of rounding the Head when bound south, 25,758–62. A harbour is more wanted north than south for laden vessels, 25,774.

Marshall, T., Shipmaster. Filey is the place for a harbour of refuge, 25,788. A harbour there would be better than improving the coal ports, 25,792. It should hold 400 vessels, 25,796. Need of a harbour to refit in bad weather, 25,805–10. There is more danger to life in laden vessels than in light; but a harbour is necessary for both, 25,818–22.

Bartlett, Robert, Shipmaster. Harbours are desirable at Redcar and Filey, 25,841–46. Bad sea at the mouth of the Tees, 25,850. Land at Hartlepool is bad to make in thick weather, 25,854–64. Broken water off Hartlepool, 25,865. The third sea is the worst, 25,869–71. Hartlepool light is visible for 15 miles in clear weather, 25,878. Desirability of a harbour at Redcar; Hartlepool is already a harbour, 25,887, 88 It is dangerous for a stranger to run inside the Ferns, 25,911. Long Hope is easy of access, 25,917. There is no danger in running through the Pentland Firth, 25,919–23. A harbour would be useful about Aberdeen, 25,933.

Clarkson, William, Shipmaster. Desirability of a harbour in Bridlington Bay, which would be the best spot for light ships, and nearly so for laden ones, 25,946–48. Good holding ground, 25,962. Has been four or five days under Speeton Cliffs, when with a harbour in Bridlington Bay could have got round, 25,969. Sea is heaviest with south wind on south side of Head, 25,972. More vessels are detained going north than south, 25,982. Desirability of breakwater on Smithwick Sand, 25,985. If only one harbour be made, it would be better in Bridlington Bay than in Filey Bay, 25,993. After Bridlington, a shelter should be made at Redcar, 25,996. Or Hartlepool, 26,001.

HUMPHREY, SAMUEL. *See* CARDIFF.
HUNT, CHARLES. *See* LONDON.
HUNTLEY, ROBERT. *See* HARTLEPOOL.
HURD, —. *See* SUNDERLAND.
HUTCHINGS, —. *See* PORTRUSH.
HUTCHINGS, ARCHIBALD. *See* PADSTOW.
HUTCHINSON, WILLIAM. *See* HARTLEPOOL.

JACK, JOHN. *See* DUNDEE.
JACKSON, CHARLES. *See* LEITH.
JACKSON, RALPH WARD. *See* HARTLEPOOL.
JAMESON, WILLIAM. *See* WHITBY.
JENNINGS, WILLIAM. *See* ST. IVES.
JOBLIN, JOHN. *See* NORTH SHIELDS.
JOHENESON, —. *See* PETERHEAD.
JOHNSON, JAMES. *See* HARTLEPOOL.
JOHNSTON, —. *See* PORTRUSH.
JOHNSTONE, J. *See* GLASGOW.
JONES, JENKIN. *See* CARDIFF.
JONES, MATTHEW. *See* SWANSEA.
JOPP, J. F. *See* PETERHEAD.
JORDISON, ROBERT. *See* HARTLEPOOL.

KELSO, JOHN. *See* GLASGOW.
KENDLISH, —. *See* NORTH SHIELDS.
KIDD, GEORGE. *See* DUNDEE.
KING, RICHARD POOLE. *See* BRISTOL.
KINNEAR, ARTHUR. *See* STONEHAVEN.
KIRMODE, JAMES. *See* DOUGLAS.
KNAPP, JAMES N. *See* CARDIFF.
KNOTT, HENRY. *See* BRIDLINGTON.

LANGTON, CHARLES. *See* LIVERPOOL.
LEE, THOMAS. *See* BRISTOL.
LEITH (Witnesses examined at):

Broadfoot, John, Merchant and Ship Agent. A harbour of refuge at Peterhead desirable; great facilities there for saving life and property, 3139–3141. Several harbours to receive vessels of 300 or 400 tons would be better than one large one, 3142–3144. There is no access to the docks at Leith at low water spring tides, 3154.

Macgregor, Donald. A harbour of refuge is required on the north-east coast of Scotland (at Peterhead or Wick), and one on the north-east coast of England (near Whitby or Scarborough), 3157–3159, 3169. One large good harbour better than several smaller imperfect harbours, looking to the future, 3161, 3208. Small coasters are fast disappearing before steamers, 3171. Pentland Firth and Holy Island are dangerous places, 3180–3182. History of the debt on the Leith Docks, 3183–3195. Causes of many of the wrecks in the Firth of Forth, 3201. A breakwater erected at Inchkeith would form the very best harbour, 3202. St. Margaret's Hope, if lighted, would be a good harbour at night, 3211.

Dickson, Capt. Harbour much wanted on the east coast of England, 3223. Hartlepool is the most eligible spot; more so than Filey Bay, 3224–3236, 3241. More wrecks off Hartlepool and Whitby than elsewhere, 3249, 3250.

Mann, Capt. *Benj.* A harbour is needed on the east coast of England; Hartlepool the best site, 3256, 3264; one would be useful at Peterhead, 3258, 3273. Many vessels caught off Flamborough Head drive on shore for want of a harbour, 3264–3276.

Brown, Capt. *Alex.* A harbour of refuge is needed on the east coast of England; Hartlepool the most eligible site; more so than Filey Bay, 3282–3297. One large harbour at Hartlepool would be better than improving smaller ones, 3288.

Colme, Robert, Fisherman and Pilot. A harbour of refuge is much needed between Firths of Forth and Pentland; Peterhead is the best spot, 3309–3316. Harbour protection to fisheries required in Moray Firth, particularly at Newhaven, 3317–3333. St. Margaret's Hope, if lighted, would be a good harbour, 3336–3347. Shelter for vessels at Fraserburgh, 3348. Advantages of Cromarty, 3354.

Thompson, William, Merchant and Shipowner. Advocates assistance to Anstruther and Cellardyke for protection of the fishermen, 3357, 3378, 3382. A harbour of refuge is not needed on the north-east coast of Scotland, but is on the north-east coast of England, 3359. Hartlepool is the best site, 3362. Objections to passing tolls, except on east coast of England, 3368–3373. A harbour of refuge is necessary at Wick for the fishermen, 3396. Loss of life among fishermen, 3400–3409.

Jackson, Charles. Is interested in the formation of a harbour of refuge on the north-east coast of England; 3411.

LESLIE, DAVID. *See* DUNDEE.
LESLIE, GEORGE. *See* ABERDEEN.
LESLIE, JAMES. *See* PETERHEAD.
LEWIS, JOHN. *See* CARDIFF.
LINDSAY, ALEXANDER. *See* LONDONDERRY.
LISTER, —. *See* REDCAR.
LIVERPOOL (Witnesses examined at):

Thompson, —, Secretary of the Mercantile Marine Association. The Association considers this not a mere shipowners' question, but as involving the lives of masters, officers, and seamen, *page* 198.

M'Arthur, John, ex-Shipmaster. The Skerries of Portrush is an excellent harbour for windbound vessels, particularly for the north channel, 6448–6463. At the Isle of Man, Ramsay Bay is the only anchorage as a harbour of refuge, 6467, 6503. There is good holding ground,

6506–6511. Does not know that vessels leave the port with the crew drunk, 6479. No point but the Skerries for a harbour of refuge in the north channel, 6483. It is advantageous with all winds, 6484. Lough Foyle a good harbour, 6488, 6517. Loch Laughan affords good shelter in north-east winds, 6493, 6494. Still thinks a harbour of refuge at the Skerries necessary, 6497. A harbour on the north coast is required for inward and outward bound ships, 6516.

M'Darmaid, Archibald, Steamboat Master. Thinks Skerries the only fit place for a harbour of refuge, 6535. Vessels can take there when they cannot take Lough Foyle, 6536. The heaviest sea runs through the west sound, 6543–6547. Would shut up the west sound, 6548, 6549. There is no use in a harbour of refuge at the Isle of Man for the Liverpool trade, 6552. Harbours of refuge are desirable for the safety of life, 6559. With public money at disposal, would apply it in Skerries Roads, 6560, 6582. Loch Foyle has a bad entrance; no vessel can get in with a heavy westerly wind, 6571, 6572, 6611. On the east coast of Scotland, Wick is better than Peterhead, but Fraserburgh the best, 6588–6591.

Roach, George, Master Mariner. Deepening the bar the only improvement requisite for the harbour of Carlingford; plenty of shelter inside, 6621, 6622. If the bar were open, ships could go in at any time, 6623. Waterford Harbour much preferable for deepening, to Wexford, 6625. The Skerries an excellent place for a harbour, 6631. Useful for coasting vessels and foreign trade, 6632–6635. A harbour on the north coast of Ireland would be useful to the Liverpool trade as a port of call, 6642. If there were a harbour of refuge on the north coast of Ireland, American vessels might reach it when they failed to get to Cork or Falmouth, 6646. The numerous casualties off Liverpool, as compared with Skerries, result from the greater number of vessels leaving the former port, 6653. In adverse winds going north, would desire a harbour first in Carlingford and then in the Skerries, 6657–6659. Going south, Waterford would be the best port for incoming ships, 6660. Pentland Firth not a dangerous navigation in clear weather, 6666. Instances of vessels which might have been saved with a harbour at Carlingford, 6674–6681. Suitability of Carlingford for a harbour of refuge, 6682–6696. Waterford could be run for with a disabled ship, and in all dangerous winds, 6698, 6699. Outward-bound ships caught off a lee shore west of the Tusker should go into Waterford, 6704–6706. If disabled, would take Portrush in preference to Lough Foyle, 6715. With anchors lost, would run up Carlingford Bay, and into the mud, 6720, 6721.

M'Clennan, Wallis, Master Mariner. A harbour of refuge at Carlingford would be useless for the Liverpool trade bound south-east, 6729. It is too close to Liverpool; Waterford would be of more service, 6731, 6732. Would not take the north passage were there a harbour at Skerries, 6743. A port to the west of Tusker would be of great service, 6747. Padstow has a bad entrance, and is difficult for strangers, 6751. A harbour not necessary there; vessels can shelter off Lundy, 6752. Would not run for Portrush with a deep-laden ship, 6755. Would run for Lough Foyle in preference, 6756.

Garson, John. A harbour at the Skerries desirable, 6759.

Dawson, William. Presents a memorial on Vough's breakwater, 6759.

Hawkins, Arthur, Master Mariner. A harbour of refuge in the north channel very desirable, notwithstanding existing harbours of refuge, 6769–6774. It should be about Portrush or the Skerries, 6775-6801. Waterford would be an excellent harbour if the water were deeper; Carlingford also; and of great use to shipping in bad weather, 6788, 6789. Many good ships are lost for want of a harbour of refuge, 6793. Pentland Firth is dangerous all the year, especially so in winter, 6797. Stromness is a very good harbour, 6800. Lough Foyle would do in an emergency, but it is difficult to take in the winds in which refuge is required, 6802–6805. Belfast Lough is an excellent harbour, 6809. If a harbour of refuge were made at the Skerries, that passage would be more used, 6832. And it would be of advantage to commerce, 6833. If a harbour were properly constructed it would afford safe anchorage in a north-east gale, 6844. If a breakwater were built over the rocks in Skerries Bay, it would be safer, 6853. Only two openings in Skerries Bay that a ship could take, 6867. The one on the north side should be left open, 6869.

Graves, Samuel Robert, Chairman of the Shipowners' Association. Harbours of refuge would tend greatly to preserve life and property, especially on the east coast of England, 6881, 6882. And lower the rate of assurance, 6883, 6901. A harbour of refuge at the Portrush Skerries would be advantageous, 6888. The great shipowners would object to contribute towards harbours of refuge; it is a national, not a commercial question, 6902–6906. Vessels that might have been saved had there been sufficient water in Waterford, 6910. Wrecks in the channel do not arise from the want of harbours of refuge, 6912. Imperfect knowledge and negligence are the chief causes of wrecks, 6913. One of the greatest advantages of harbours of refuge would be the prevention of collisions, 6919. A fair-way light, 30 or 40 miles off land, is most valuable, 6920. Advantage would result from a better mode of buoying harbours, and greater uniformity of lights, 6921. Good would result if the natural harbours were buoyed and lighted better, 6922. Harbours of refuge more required for small than large craft, 6924. Local Marine Act has tended to improve the condition of masters and mates, 6925. Seamen are improved in character now, but less skilful, 6926. Encouragement of Sailors' Homes would tend to increase the sailors' morality, 6929. The Shipowners' Association of Liverpool consider harbours of refuge desirable, not necessary, and object to be taxed for their construction, 6934–6936. Prevention of wrecks by harbours of refuge would reduce premiums of insurance, 6938. But the public would gain by the reduction, not the shipowner, 6941. A passing toll is obnoxious; would rather pay the underwriters, 6949. Harbours of refuge tend to some extent to the saving of lives, but not to the same extent to the preservation of property, 6953. Would prefer not having harbours of refuge if at the expense of the shipping interests, 6955. Greater facilities in using the lead would tend to save property, 6959–6968. Desires uniformity in buoying harbours, 6970–6972. A harbour of refuge on the north coast of Ireland might give more confidence to masters, 6975. Harbours and lights should be paid for by the community at large, 6987. In a national point of view, the seafaring population have a greater claim for protection of life and property than the rest of the population, 6990–6996. We should rather encourage a moderate expenditure generally diffused, than large works for particular localities, 6999.

Langton, Charles, Insurance Broker. The underwriters of Liverpool consider harbours of refuge would be to their interest, and save life and property, 7007. They would but little affect insurance, 7008. Losses have occurred from the state of the crew on leaving port, 7020. Wrecks in Carnarvon Bay, close under the Stack, 7027. The formation of harbours of refuge should be a national undertaking, 7035, 7036. No extra premiums of insurance on ships going through Pentland Firth, 7037. Losses on the Blackwater Bank, 7039–7042. No great advantage would result from a harbour of refuge in that locality, 7043. Another light in Cardigan Bay desirable, 7045. North Channel is considered sufficiently lighted, 7047. Insured vessels may take any channel, 7048–7051. A small reduction of premiums on late Baltic vessels going through the Caledonian Canal, 7052. Which commonly equals the vessel's dues, 7054. Escaping Pentland Firth lessens the risk, 7055. Losses on the Blackwater Bank, owing to neglect of the lead, 7056. If there were a light on Sand Badrig, vessels would make more boldly for the Welsh coast, 7064. No different insurance for vessels going north of the Orkneys or through Pentland Firth, 7075. Harbours of refuge would be of great advantage, particularly for vessels stranded or partially damaged, 7078.

Coghill, Alexander, Ship Agent and Shipowner. No part of Great Britain where a harbour of refuge is more needed than at Wick, 7087. Opinion based on nautical experience of masters and on personal knowledge, 7091. This season vessels have had to lie ten days in the bay for want of harbour room, 7099. Many lives would be saved even if a harbour of refuge were made for fishermen only, 7102. The catch of fish would probably be increased with a harbour to run to, 7107. It is a national object, 7108, 7109. It would be applicable to the passing trade as well as the trade of the place, 7114. Wick is the best site, 7115, 7121. A harbour desirable for Peterhead also, but one at Wick would be more convenient for most vessels, 7124–7128. A harbour of refuge at the Skerries (Portrush) would be very useful, 7129. One at the Isle of Man uncalled for, 7130. Outlay of public money on a mere port of call not justifiable,

7139. A harbour at Peterhead would be more used for stopping than refuge, 7146. Small vessels prefer the Caledonian Canal to Pentland Firth, 7149.

Mandell, Joseph, Shipowner. Harbours of refuge are necessary at points where great losses have occurred, 7158. No passing toll should be paid, 7159. It is a national question; anomaly for Liverpool shipowners to contribute, 7160. Liverpool ships less liable to casualties than east coast vessels, 7164. Vessels using harbours of refuge should contribute, not those which merely pass them, 7165. Would willingly contribute to a port affording him protection, 7166. Vessels keeping the sea to avoid harbour dues would not tend to loss of life, 7167. A harbour of refuge better on a salient point, 7172–7174. A harbour about Douglas would be advantageous to the Liverpool trade, 7189. There is no harbour of refuge from Liverpool to Solway Firth, 7190. Harbours of refuge in the north channel less necessary, 7191–7193. A harbour at Douglas preferable to Portrush for the Liverpool shipping, 7195. Would devote an equal sum to the improvement of Carlingford and Waterford, 7196, 7197. National money should be spent only on harbours of refuge for helpless vessels, 7206. Local advantages would justify a moderate outlay on a harbour, 7210, 7211. No good anchorage for large ships at Ramsay; other disadvantages, 7213–7216. But, except 20 miles difference, Ramsay is preferable to Douglas, 7218. A considerable difference between the winds observed here and those in the Irish Channel, 7222.

Clark, William, Shipmaster. Heaviest sea at the Skerries caused by the north-west wind, 7229. The sea rolls heaviest through the broad sound, 7236. In constructing a breakwater would shut up the broad sound, 7242. The anchorage then would not be disturbed, 7244. Lough Foyle can be always entered with safety in north and north-west winds, 7257–7260. If the north channel of the Skerries were filled up, Portrush would be nearly land-locked, 7265. With a breakwater built to the broad sound the Skerries would be the finest harbour on the coast, 7271. Lough Larne is a very fine harbour for the coasting trade. It is much frequented, 7275, 7276. At Wexford a good harbour of refuge could be made, and would be of great service, 7281–7284. Waterford is a clear harbour to run for, if there were more water, 7285–7287. Lough Swilly may be taken night or day, 7291–7293.

LONDON (Witnesses examined in):

Dale, William, Shipmaster. Belongs to Whitby, 26,015. For a large harbour of refuge, Filey is as good a place as any, but Whitby is more central, 26,017–30. For laden colliers bound south would prefer Filey to Hartlepool, 26,031–42. Two harbours better than one large one 26,046. Laden ships most in need of refuge, 26,047–52. If two harbours are to be made they should be at Filey and Hartlepool, 26,066. As much property is lost on Whitby beach as at any other place, 26,069.

Turner, William, Shipmaster. Belongs to Banff, 26,070. If a harbour of refuge is to be made on the east coast, it should be at Hartlepool, 26,076–85. Tidal ports, such as they are now, cannot be harbours of refuge, 26,101. A harbour at Filey, and another in the bight of the bay, would be better than one large harbour in the bight, 26,102. Filey would be a better place than the depth of the bay for laden colliers caught off Flamborough Head, 26,105. The largest proportion of vessels in the coal trade are good; never saw one being broken up, 26,110–22.

Noble, Charles, Shipmaster. Belongs to Fraserburgh, 26,128. A harbour of refuge on east coast of England should be about the mouth of the Tees, 26,132. The sea is more broken south of Flamborough Head than north, 26,139. Is fearful of taking Hartlepool in bad weather because of the tide, 26,141–47. A harbour at Filey Bay would be of great benefit to vessels caught off Flamborough Head by east-south-east and south-east gales, 26,157. Loss of life is greater in laden than in light vessels; a harbour of refuge should have special reference to laden vessels, 26,158–61. Has taken Shields Harbour in bad weather, but with great risk, 26,175–82. The general opinion among seafaring men of his acquaintance is that the harbour should be in the bight of the Tees, 26,189–96. Colliers are generally bad ships, badly found, and insufficiently manned, 26,197–205. Would place a harbour in Tees Bay rather than in Filey, for all purposes, 26,227.

Walker, Robert Philip, Publican, ex-Shipmaster. Belongs to Whitby, 26,234. Redcar would be the best place for a harbour of refuge for the class of vessels on the coast, 26,235–37, 26,249. Would not like to run for the Tees with the wind blowing hard, 26,241. None of the tidal harbours could be improved; would prefer a large harbour of refuge, which is the general opinion of seafaring people upon the coast, 26,253–56. For laden colliers bound south, caught near Flamborough, Filey would be a valuable harbour of refuge, 26,258–61. Filey and Redcar would be the two best places between the Humber and the Forth, 26,263. Would prefer a harbour exclusively for refuge to one which also had a trade, 26,268–78. Broken water off Hartlepool, 26,290–94. Vessels in the coasting trade are generally a very poor class, both aloft and in the hull, and are commonly overloaded, 26,295–302. If a large harbour were made at Hartlepool, vessels would come outside and load in the refuge harbour; it would be no hardship to enforce a heavy penalty for so doing, 26,315–19. There is less broken water off Redcar than off Hartlepool, 26,330–32. Would rather run for Redcar than Hartlepool, 26,334.

Ware, James, Water-bailiff of Bridgewater. Appears on behalf of the Bridgewater Corporation, 26,342, 43. No place in Bristol Channel more convenient for a harbour of refuge than Lundy Island, 26,345–51. Has made Lundy Island many times easily in very bad weather, 26,352–54. The land about the Mumbles is a bad landfall in bad weather, 26,355–61. There is good anchorage above the Holmes, 26,363. Milford not well to make in thick weather, 26,374. Between Hartland Point and Land's End the best place for a harbour of refuge would be St. Ives, 26,379, 448. Padstow would form a desirable harbour if the Doombar could be removed, 26,453–56. Lundy would make a good harbour of refuge if enclosed, 26,463–69. St. Ives would be a valuable place of shelter if protected by a breakwater, 26,475–77. Mumbles would be improved by deepening and dredging, 26,480. Would prefer a harbour at St. Ives to one at Padstow, 26,488–503. A harbour of refuge at Lundy should be large enough for 100 sail, 26,510–12. Good holding ground at Lundy, 26,516. Taking the whole of the Bristol Channel, prefers first Lundy, then St. Ives, 26,525.

Hunt, Charles, Shipowner. Concurs with last witness as to a harbour of refuge at Lundy Island, 26,540. The whole channel about Lundy Island is nearly a harbour of refuge by itself, 26,542. With a heavy breeze would not run for the Mumbles, but for Penarth, 26,544, 45. The Mumbles is a bad place for a harbour of refuge, 26,550–54. St. Ives Bay is the best place for a harbour between Hartland Point and the Land's End, 26,557–59.

Arnold, John W., Trinity House Pilot. A harbour of refuge between Flamborough Head and the Farn Islands should decidedly be at Filey, 26,583. Broken water in Hartlepool Bay, 26,607–14. A harbour of refuge at Filey would save more loaded vessels than one at Hartlepool, 26,620, 33. Would prefer a large harbour at Filey to two small ones, 26,630. It would be a great advantage to the off-shore fishing vessels, 26,631. More vessels are detained at Flamborough Head than on any other part of the coast, 26,639–45. Most of the vessels in the coal trade are worn out as respects the hull, though fairly found aloft, 26,656–63. The land about Hartlepool is bad to make, 26,678. Could run into Hartlepool Bay in thick weather by soundings, 26,682. Could tell by soundings when he was running for Flamborough Head, 26,688. Light colliers will risk anything to get to their ports, therefore those ports should be improved, 26,710–13. At Shields 14 or 15 feet at low water would be sufficient protection for light ships, 26,714. At the Tyne it is desirable to continue the piers, especially the north pier, into deep water, 26,716. Would improve Hartlepool by running out a pier on the Heugh and another on the Longscar, 26,720. If this were done, there would be no difficulty in running for it, 26,722. Shelter is much needed at Hartlepool, on account of the number of accidents there, 26,728. Filey would afford good shelter for ships in the Baltic trade driven to the southward of Flamborough Head, and for fishing vessels, 26,734–42. Heavy freshets sometimes come down the Tyne; they do great mischief, and make a worse sea upon the bar, 26,752–59. Prevalent winds in the North Sea, 26,760–67.

Robertson, Captain, R.N., Surveyor General of the Marine Department of the Board of Trade. The return of wrecks is made out under his superintendence, 26,770. The return for 1857 is more accurate than the two which preceded it, 26,774. The returns for 1856 and 1857 afford a safe basis for a decision respecting refuge harbours, and a fair representation of the four previous years, 26,780–93. The gradual diminution in the number of lives lost from 1852 to 1857 is owing to the greater care taken in navigating, to a better class of ships, and to the means adopted for saving life on the coast, 26,794–96. Explanation of table of wrecks, 26,797–804. The returns of wrecks were originally given by the Admiralty, with much less perfect machinery for attaining accuracy than exists at present, 26,811–26.

Hamnton, George, Able Seaman. Condition of the coal vessels in which witness was employed, 26,842–71. All belonged to the same owner, who had 34 ships, about two-thirds of which were bad, 26,872–80. There are very old ships in the coal trade; has seen one of them opened out; the timbers were rotten and the planking very bad; some of the timbers were replaced, and the planking was made good, 26,886–93. Has known vessels so bad that men would not go on board, 26,900–11. As a general rule, the coal vessels are sufficiently manned, 26,905.

Burgoyne, General Sir *John*, Inspector General of Fortifications. The principle of improving harbours by scour is erroneous; the greater the scour the more injurious the effect. The best harbours are those where the sea has a clear and smooth run in and out; a strong current out of a harbour tends to create a bar; rivers are unfavourable to form harbours upon, for every river with a narrow entrance and narrow channel has a bar, and the more backwater the worse the bar. The same result may be produced in great estuaries if the entrance is narrow, in proportion to the quantity of water that comes in. Portsmouth Harbour might be improved if the interior expanse were reduced by embanking the remote mud banks; this would improve the navigation of the entrance and perhaps the bar, 26,924. Rivers would sometimes make fine harbours if it were not for a bar at the mouth; this difficulty might be removed by making a harbour outside the bar and locking up to the river, 26,925,26. Piers as suggested at the mouth of the Danube would do no good, as in a narrow channel, either natural or artificial, the same effect would be produced; there would be always the great mass of backwater laying down its deposit where interrupted by the bank or body of the sea. Witness proposed an artificial harbour near the mouth, and then to lock up into the river by means of a canal, 26,926, 27. There would be less tendency in the entrance of the artificial harbour to fill up, 26,928. Cause of the formation of bars at the mouths of rivers, 26,929–31. Every river in the world with a narrow channel has a bad bar, 26,930. The "south outlet" of Sunderland Harbour is precisely what witness recommends, an entrance into deep water having a lock to prevent any violent tide in and out, 26,933. The harbour should be placed on one side the mouth of a navigable river, or else to draw away the water of the river by a new channel from the port on which the harbour is to be constructed, 26,934, 35. Notwithstanding the piers now building at the Tyne, expects the bar to form there again, 26,937. Would rather have a harbour clear of the backwater current, 26,939. The best improvement of the Tyne would be to cut off the Herd Sand and give it a bell mouth, almost reversing the order of the plan, 26,942, 43. The bar is usually at the point of the piers where the river current and the sea current meet, 26,945. In large rivers the current so far overpowers the sea that it carries the bar sometimes five or six miles out, 26,945. The water on the bar of the Tyne having deepened since the partial carrying out of the pier, must arise from the checking of the side current of sand, which, when the space behind the piers gets filled, will run round the end of the pier and probably form a bar again, 26,946, 47. The natural consequence of extending the south pier will be the formation of land, 26,949–51. The tendency of groins to make land might be corrected by leaving openings for the sand to pass through, 26,957–59. A current along the coast will throw up land on the weather side of a groin, but cut away the land on the lee side, as at Newhaven, 26,960. If the Tyne people raise 600,000*l.* towards improving their harbour and making it the means of saving life and property, Government could not spend money better than in advancing 200,000*l.* to assist the work, 26,963–70. It is possible that when the pier is carried out to a certain extent there might be no more tendency to fill up, 26,971. With the continuation of the piers and the production of a stronger current, it is only a question of time when the bar will be formed at the piers, 26,976, 77. The natural formation of Filey being so favourable, it seems worth while to go further, and enclose the whole bay, so as to give more shelter, 26,982–85. The Humber has no bar on account of its great estuary, and which lets in a great mass of tidal water, so that the backwater has not the same effect, being lost in the mass, 26,999. Anything that reduces the rapidity of the river current will have a good effect in not raising a bar, 27,004, 05. Anything that admits more sea and neutralizes the effect of the backwater would be a benefit, 27,007. Every effort of engineering skill should be put forth to improve our tidal harbours, 27,008. Disagrees with the works at Glasgow; would encourage the tidal flow to the utmost extent, 27,017–20. The Mississippi bar a strong case of the effect of backwater, 27,022. The ultimate effect of the south pier now erecting at the Tyne will be the formation of a bar, though it may form so slowly that dredging will keep it clear, 27,029–32. The more nearly the entrance of a tidal river partakes of an estuary character the less likely will be the formation of a bar, 27,033. There may be too much tidal flow into a narrow river-mouth, but not where it is wide, 27,049. A wide entrance would improve the Tyne, if it were possible to obtain one, 27,050. The coast at Filey is of the form most advantageous for a harbour, 27,063. The present depth of the Tyne bar being six feet, if the piers were carried out to thirty feet at low water, in time the six feet would deepen, and where there is now thirty feet of water there would be but six feet, 27,066. The more rapidly a river comes down to the sea the worse the bar, 27,073. The north pier, as it closes the estuary without keeping out any silt from the coast, will do more harm than good, 27,076. A pier at the south and none to the north would be better, 27,078. It is great economy to make harbours, as the amount of property saved by them is immense. The cost of construction might be reduced by lessening the quantity of cut stone employed. The unoccupied foreshore, which will become valuable, should be secured for the public, 27,092–131. Wherever public money is expended for refuge purposes a corresponding refuge area should be reserved for public use, 27,116.

Sleigh, Captain *Adderley*. Explains his proposition for an artificial or floating beach; it has been used with success at Lowestoft; there is no difficulty in mooring it, 27,133. Estimated cost, 27,134–36. May be built either of wood or iron, or both, 27,138. His proposed breakwater would be so securely moored as not to break adrift, 27,152–59. The expense of the moorings would be in addition to the price per lineal yard, 27,193. In his experiments with moorings could never get a strain on the cables, 27,209.

Abernethy, James, Civil Engineer. Presents plans of Fraserburgh, Aberdeen, Lossiemouth, Blyth, and Swansea harbours, 27,214–19. Intended method of construction for his proposed breakwater at Swansea, 27,222–27. Estimated cost, 27,228, 29. Stone would be got from the adjoining cliffs, 27,231. Ships might ride in safety behind the timber structure, which would last about 50 years, 27,237–43. The stone structure should be delayed to test the timber work and allow the mound to consolidate, 27,247. Explanation of particulars of another section, 27,254–355. From his experience at Blyth, does not think creosoted timber would decay even for 50 years, 27,356–60. The clay bottom is of such consistency that the piles would not be liable to a disturbance, 27,361–65, 27,464–72. Further explanations of the structure, 27,366–407, 27,420–63. The object of this mode of construction is economy, 27,411. There will be no subsidence of any moment in the works at Swansea, 27,491. Piers are in process of construction at Hartlepool, similar to those now proposed for Swansea, 27,494. The merits of witness's plan are, economy of material, of time, of labour, and of expense, 27,518, 19. *See infra.*

Walker, J., C. E. Report from, on a plan and estimate to show the capabilities of the river Tyne as a harbour of refuge, *page* 818. The cause of the accumulation of sand on east coast can only be discovered by actual observation, 27,530. Witness's first plan for the improvement of the Tyne was the selection of the best parts of a number of proposed plans, 27,536. Explanation of plan, 27,538–58. North and south piers are both necessary, 27,559–64. Proposed additional portion of pier is needed to make a harbour of refuge, but not for improving the bar, 27,566. Submits a section of mode of constructing the south pier, 27,568. Explanation of the mode 27,569–83. Doubts the policy of piers bell-mouthed externally, 27,586. Does not anticipate the formation of a bar, 27,587. At the Tyne, the sand from the south might tend slightly to silt up at the south pier, and more so if the north pier be shortened, 27,608–16.

The original plan was to remove the bar and give a large area of refuge, 27,625–28. The depth of two feet on the bar gained sooner than was anticipated; how it may be accounted for, 27,630–34. Does not believe that to whatever extent piers are carried out, the bar will follow, 27,640–44. Is of opinion that instead of piers causing a silting up, the tendency would be the reverse, 27,647–50. Carrying out the piers carries out the bar, but to a reduced extent, 27,657–59. The proposed improvements at the Tyne will give efficient refuge in all tides for most of the vessels frequenting the north coast of England, 27,665–73. It is desirable to free rivers from any obstruction of the upward flow, so as to give effect to the scouring of a large backwater, 27,686–90. The Clyde is an instance of the good effect produced by artificial works aiding the natural effect, 27,697–701. Improvements at Yarmouth and Dover instanced, 27,707. Tidal river harbours should decidedly be improved, 27,708. Importance of improving the Tyne; it may be made a very large harbour of refuge, 27,709–14. Further explanations as to the effect of piers on the formation or otherwise of a bar at the harbour's mouth, 27,715–39. Further observations on the movement of sand on the coast, 27,747–60. If the piers are carried out as proposed in the large plan, the great area would be free of sand, 27,775. The extension of piers increases the strength of the tide at the ends, 27,776–78. Piers at the mouth of a tidal river of the "bell-mouth" shape are more liable to the formation of a bar, 27,791–803. The rate of current at the end of piers will be affected but slightly by the depth there, 27,815, 16. Explanation as to the travelling of shingle at Dover, 27,824–28. After completion of the piers, the sea will not be likely to break in Tyne Harbour, 27,832. Square pier heads are more likely to cause a cross sea than the form proposed, 27,833–38.

Abernethy, James (re-examined). Remarks on the port of Lossiemouth; by the extension of the breakwater and the proposed new basin, considerable shelter will be afforded for the fishing boats, vessels caught in north-east gales, and steam ferry boats, 27,840. Wrecks at Lossiemouth occur from the difficulties of the navigation, and of making for the present harbour, 27,841, 42. Proposed arrangement would give 13 feet at low water spring tides at the entrance, extending 300 feet, 27,844–46. A pier is proposed to the south under the breakwater, 27,847. In the new basin there would be room for 32 vessels of 100 tons, 27,848–50. The harbour will be enlarged, independently of the breakwater, which merely facilitates entrances, 27,851–53. There is no decrease in the depth of the harbour, 27,856. The plan is not put forth as a harbour of refuge, but to provide for local accommodation, 27,859. The extension of the piers is principally to accommodate passage steamers; it will also lessen the danger to fishing boats in the outer harbour, 27,867. A ferry is proposed between Lossiemouth and Little Ferry, which would be a great boon to the district, 27,870–76. The position of the present harbour is appropriate; it is the only clear ground, 27,882. The harbour at Lossiemouth will not accommodate coasting vessels, 27,886–88. Produces a plan for a general harbour at Fraserburgh, with the breakwater extended 1,500 yards, 27,889. Clean and good holding ground inside the breakwater; estimate of cost, 27,890–99. For improving the harbour of Aberdeen proposes a breakwater from Shortness Point, 27,900. There will be five fathoms at low water, covering 13 acres; good holding ground, 27,904, 05. The breakwater might be completed in two years, 27,907. By dredging, 14 feet at low water may be got in the centre of the channel, and by securing the foundation of the pier, 19 feet, 27,908–13. This is a tidal harbour without a bar at the mouth, 27,914–17. No deposit within the harbour, 27,919. The irregularities on the coast are not filling up; the material passes with the tide, 27,924, 25. Aberdeen Harbour is exceedingly dangerous to take in south-east gales, 27,930. With the proposed breakwater, vessels might enter at high water under any circumstances, and at low water might shelter in the inner harbour, 27,935. An opening of 200 feet in the breakwater would preserve the action of the tidal current, 27,939–41. The current induced by the prolongation of the north pier has removed all traces of the bar, 27,942–44. A depth of 15 feet from the lock to the harbour's mouth may be gained by dredging, 27,951, 52. It is possible by dredging to make the harbour at Aberdeen shelter the smaller coasting vessels at all times of the tide, 27,958, 59. Respecting Swansea, the shoals in the Green Ground can be removed by dredging; the position on the plan is more favourable than Captain Denham's, 27,964, 65. The hummocks can be removed at small expense, and the best anchorage will result, 27,966, 67. Area of sheltered anchorage, 27,969, 70. The opening through the Mumbles is left to allow the current to pass, and prevent deposit, 27,972. The greater portion of the breakwater must be constructed to afford shelter, 27,974–77. The harbour would accommodate 1,500 vessels, 27,978–80. Three vessels to the acre a fair average; in a dock, 9 or 10, 27,981. With moorings double the number might be put, 27,982, 83. At Hartlepool the sand travels to the north, 27,992. Puts a pier because it is desirable to preserve the tidal current round Hartlepool Bay, 27,994. The breakwater enclosing the south side is to cover the west harbour from south-east gales; the extension of the south breakwater insufficient, 27,996, 97. The width of proposed opening in the breakwater 850 feet; there would be two in the larger harbour, 27,999. Magnesian limestone of hard quality can be procured near Hartlepool, 28,001. Thinks the sea will not break outside the harbour in five fathoms, 28,003–06. If the larger design be adopted the Longscar Rocks would be removed, 28,000–12. *See infra.*

Scott, Michael, Civil Engineer. Makes a statement respecting his new arrangements for breakwaters, submitting a model, its peculiar principle being that nothing is driven into the ground, but all rests by the weight of the stone packing, 28,015–26. At Blyth, after the first settlement of the stones there has been no disturbance, 28,027–38. Explanation of his model of proposed breakwater its construction, method of working, time of execution, cost, &c., 28,039–87. Method of depositing the stone in the framework under water, 28,088–108. The stones are "packed" quite sufficiently by the sea, 28,109–18. There has been no difficulty or disaster in carrying out the works at Blyth, 28,119–21. Durability of creosoted timber, 28,122–24. Further explanation of his model, 28,130–53. Produces and describes a model of a breakwater to be erected on a rubble mound; of a different principle of construction from Mr. Abernethy's; details of method of construction, cost, and advantages, 28,154–261. Capability of quick construction, 28,263. Explanation of the peculiarity or novelty in his model, 28,272–89. Further explanation of the method of construction and cost, 28,291–310. *See infra.*

Calver, Edward Killwick, R.N., Admiralty Surveyor of the East Coast of England. Reads a statement on the subject of harbours of refuge on the eastern coast of Great Britain, between Pentland Firth and the Humber. *Wick.*—The numerous wrecks which occur in the Moray Firth would not be prevented by a harbourt at Wick. No seaman would shelter at Wick, when by heaving to for a few hours he might pass safely through the Pentland Firth. Scapa Flow does away with the necessity for a war station on the Caithness shore. It possesses completely all the important requisites for a naval rendezvous in time of war. No vessel in the navy could use Wick Bay. The claims of Wick are confined to its extensive herring fishery. Accessible shelter in the vicinity of the fishing grounds is the first requisite. Life at Wick is exposed to especial risk. The fishermen should have a refuge harbour in the north of Scotland. A harbour should be of the construction of those proposed by Messrs. Stevenson, and the late Messrs. Rendel and Bremner. *Peterhead.*—Peterhead has much in common with Wick. A harbour of refuge at Peterhead comparatively useless for saving life and property, but would be useful as a port of call. *North-east coast of England.*—A refuge harbour should admit vessels of at least 20 feet draught at all times of the tide. The entrances to the harbours on this coast are impeded by bars of sand. Depth of water is the vital point as respects refuge, respecting which the gain by artificial means for the last century has been next to nothing. It would be a waste of money to improve the entrances of the north-east tidal harbours for the purpose of harbours of refuge. To remedy embayment, Hartlepool is the best site between the Firth of Forth and the Humber; and nearly all the loss of life and property in the north-east bight might be prevented by a harbour of refuge there. *Filey.*—Reasons why one great harbour should not be constructed at Filey in preference to Hartlepool. If another harbour were formed it should be in Bridlington Bay. Statement of the principles on which his opinions are based, *pages* 848–853. Explanation of a plan showing the line of embayment, 28,316–21. Advantages of a "bell-mouthed" entrance in certain cases, 28,324–330. A well-defined approach is one of the elements of a good harbour; there is a good approach to Hartlepool, 28,331–34. Recommends a harbour at Wick solely for the fishing trade, 28,335–43. As regards saving of life Wick is more important than Clovelly; but places should be assisted according to their peculiar claims, 28,344–48. Other places must be cared for; Government money must be granted for purposes useful to all classes, but places benefited should assist in defraying the expense, 28,349–65. Further explanations as to the formation of bars at the mouths of harbours, 28,373–88. Objection to piers at Hartlepool; would make the harbour by covering works; piers at any part of the coast, with a drift of sand on either side, will gather sand at their back, and close up the entrance, 28,389–402. Carrying out piers involves the same obstruction without increasing the force for overcoming it, 28,407–10. The bar will be between the pier heads wherever they may be placed, 28,411–18. Most ships are lost in south-east gales by running for the ports, which is a wilful act of the parties, and should not be provided for, 28,426, 27. Improvement of the Tyne is impossible, 28,428. No bar harbour with an issuing river can be called a harbour of refuge; matters necessary for such, 28,429–31. The majority of vessels lost on entering the Tyne would be saved by a depth of 28 feet at low water, 28,446. If there is but one harbour, prefers Hartlepool, 28,448. Redcar is objectionable, being encumbered with rocks, 28,449, 50. For saving life, prefers Hartlepool to Filey, 28,451; and Bridlington to Filey, 28,452. The latter would make a better harbour for saving life than the Humber now is, 28,453–58. To vessels unable to make a passage south, Filey would be advantageous to prevent them running back, 28,470, 71. If but one harbour is formed, it should be at Hartlepool; Filey would not decrease the evils of the north-east embayment, 28,472. A harbour at Bridlington would decrease the risk of loaded vessels; a harbour at Filey would only save for a short time, but one at Bridlington would be a benefit in perpetuity, 28,477. During the fishing season at Wick there are 7,000 lives exposed to risk; at Clovelly, 300. There is no port to run to at Wick; at Clovelly they can get round Morte Point, 28,478–84. Scotland has a claim on Government funds for coastal improvement, as well as England and Ireland, 28,485. Further explanations as to the navigation on the north-east coast of England, 28,491–99. Further explanations as to the movement of sand, &c., along the coast, and the effect artificial works at Hartlepool and Filey would have upon it, with reference to the suitability of each for a harbour, 28,500–28. In laying out money would provide for the great risks first, 28,529 - 34. If a storm arose when the 1,500 fishing boats were on the sea at Wick, and a flood tide was running, would expect half of them to be lost, 28,541. Regarding life and property, Wick has as good a claim to assistance as a port for common vessels, 28,546, 47. All river harbours are not bar harbours, 28,548. The creation of bars is the operation of the sea by a marginal drift endeavouring to shut the river up, 28,549–51. The liability to accumulate on a coas.l depends on the material travelling along it, 28,5541 Close harbours favour accumulation; Kingstown is an exception, 28,555, 56. Bridlington Bay will not fit up, if a proper work be constructed in front, 28,557. To vessels bound south, unable to weather Flamborough Head, a harbour in Bridlington Bay would be useless, 28,562. Prevalent gales in the North Sea, 28,563–66. The movement of soil on the east coast of England from north to south depends on the sea stroke; illustrative instances, 28,576–78. The presence or amount of movement cannot be developed without constructing works; at Lowestoft 17 feet of sand has accumulated since the advancement of the pier, 28,579–83. At Wick Bay it would be impossible to put a breakwater far enough out to prevent danger from the breaking sea, 28,584–87. The breakwater he proposes to place in Hartlepool Bay is the "Wave Screen," 28,592–97. Believes that the sand drift would go outside the screen, 28,598. The drift is the disintegration from the sandstone districts of the north, travelling from the Tweed to the Thames, 28,601–04. Silting arises from matters held in suspension, distinct from the sand drift; both are mechanical actions, 28,605–08. With Mr. Walker's piers the bar would be re-formed in time, 28,609–12. Differs from Mr. Walker respecting the depth of water, and inclined plane, 28,613–15. Theory as to the formation of bars, 28,616–18. Calliper-shaped piers very favourable to a fair sea through the opening; a bell-mouth makes the worst possible sea, 28,620, 21. The danger in running from Flamborough Head to Hartlepool arises from inferior vessels, and their hanging on till the last moment, 28,623, 24. A wave's action will move shingle towards the mainland through 12 fathoms, 28,625. There is a motion at the bottom of the sea in 12 fathoms, resulting from undulations conveying their own impression that depth, 28,627. The Tay generally is an excellent harbour of refuge, 28,631–33. On a straight coast the site should be central, 28,635. A tidal river should be dealt with as far up as the tide flows, 28,637. In the Tyne the utmost amount of tidal contents should be invited by decreasing the friction, 28,638. If all the obstructions in the Tyne were removed, the evil would not be entirely done away with, 28,640. The bed of a river should be dredged in the first instance; a process valuable in getting a river into condition, but not in maintaining it, 28,642, 43. A river in "train" should maintain itself; to increase the depth it must be dredged, 28,644–46. The Holderness coast is cut away seven feet per annum; all the material being carried to the south, 28,654. There is a movement of matter in suspension at a depth of 15 fathoms, 28,668. Further explanations as to the bar at the Tyne, 28,674–76. Explanation as to calliper piers and bell-mouth piers, 28,677. Mr. Abernethy's pier for Aberdeen cannot give the 13 acres proposed, 28,683–86. Only artificial power would maintain the depth, and an opening would not prevent lodgment of matter, 28,687–91. *See infra.*

Francis, George Grant. Reads a statement illustrating his evidence respecting the Bristol Channel above Hartland Point, 28,694.

Memorial of the Tyne Improvement Commissioners, advocating the improvement of the river for the purposes of refuge, and requesting a contribution of 400,000*l.* for its accomplishment, *pages* 868, 869.

Calver, E. K., R.N. (re-examined). Explanation of the cause of a lee-going tide making less sea than if there were no tide at all, 28,698–702. Illustration of previous remarks relative to the movement of soil on the coast, 28,703–11. Illustrations and explanations on the depth and power below the surface of waves, 28,712–15. Further remarks respecting the formation of bars, 28,714–16. Reiteration of opinion that the works at the Tyne will ultimately cause the re-formation of a bar at the pier heads, the deepening of the Herd Sand, and the banking up of sand southward of south pier, 28,717–20. Further explanations as to the bar at the mouth of the Tyne; final belief that the proposed works will make the entrance to the Tyne more dangerous than it is now, 28,726–47. Explains the cause of the absence of sand on both sides of Filey Brigg, 28,748–57. A work cannot be projected to produce the same effect at Filey as at Hartlepool, 28,760, 61. The great point in projecting a refuge harbour is, how little can you interfere with the motion of sand, &c., so as to render it consistent with refuge, 28,762. A work at Filey Bay will tend more to decrease depth than one at Hartlepool, 28,763. Filey Bay cannot silt up while in a state of nature; Hartlepool has silted considerably, 28,764, 65. Harbours of refuge should be disconnected from the shore so as not to disturb the natural action of the sea, 28,766–68. Nothing after Mr. Walker's plan should be permitted on the coast, 28,769, 70. Works transverse to the current should not be permitted; parallel would be no objection, 28,771, 72. A harbour might be constructed at Hartlepool on these principles, 28,773, 74. A harbour on his system might be constructed opposite the Tyne, but would not recommend it for the purpose of saving life, 28,775–78. Great ports of commerce should supply refuge; a screen like that proposed at Hartlepool might be supplied at the mouth of the Tyne, 28,779, 80. Further opinions on the effect of Mr. Walker's proposed piers, 28,781–802. A collection of vessels off Flamborough Head never arises but in strong south-west gales, 28,803–06. A harbour at Filey would be useful to prevent detention, but not for life-saving purposes, 28,815. It would tend to diminish wreck and foundering while there were no other harbour to the northward, 28,817.

Makes a statement relative to his invention, the "Wave Screen;" its object is to screen places from the effect of the waves, and supersede the necessity of breakwaters in forming harbours of refuge, 28,818. Holyhead is silting up, 28,819. Description of the wave screen; its amount of resistance; effects and cost of the structure; saving life is the object of the invention, 28,818–24. Instances Silloth to show the defence from the sea afforded by piles, 28,833. Further explanation as to its construction, 28,841–46. This structure destroys the breaking wave altogether; still water, and half the undulation within, will result, 28,847, 48. It provides perfect protection from wind, and in gales vessels would lie at anchor nearly as easily as under a stone breakwater, 28,851–53. Description of the method of placing his screens in the ocean, 28,854–79 The screen will be placed broadside to the stroke of the sea; it possesses ample power of resistance to every stroke, 28,879–83. Present breakwater harbours as a system eminently unsuccessful, 28,886. Long-slope breakwaters can never be finished if an oblique sea comes on them, 28,888. His wave screen would never require repair, 28,889. Different reasoning applicable to stone and timber harbours, 28,890. Would not recommend the system adopted at Portland, 28,892. A harbour allowable at one part of the coast might not be so at another, 28,895–97. Would recommend the wave screen wherever the frontage soil permitted; would stop the present works and place it at Dover; would have placed it at Holyhead, 28,901–06. Holyhead Harbour is silting up, and it will gradually decrease in depth, 28,907–12. Reasons of the faultiness of projected harbours, 28,913–22. The wave screen is adapted to those places where matter is held in suspension, 28,926. Further explanation of the construction of his invention, 28,930–38. Action of the waves on the screen; the water will be highest outside the screen, 28,940–61. Further explanations as to the stability of the structure, 28,963–70. The cost will depend upon the means employed, 28,971, 72. Holyhead Harbour is designed on incorrect principles; a work might be made there to ensure permanent depth and double the present space, 28,974–77. The construction of refuge harbours should not be left to the opinion of one man, and he not a nautical man, 28,979–83. The waters in Holyhead Bay are charged with earthy silt, 28,984–86. From the piles of Portland and Holyhead may be drawn an inference favourable to the wave screen, 29,003–05. Objects to the principle of structure at Portland; it will always be subject to wreckage, 29,017–28. Observations as to the materials of which the wave screen is composed, 29,030–36. The wave screen is not a breakwater, but in lieu of one, 29,042, 43. The wave will not strike so as to destroy the screen in the position in which it could be located, 29,049, 51. Rocks are worn by the waves because they are not in the region of simple undulations, and subject to percussion; his structure will resist the sea action, 20,051, 52. In no case will the piles be loosened from their sockets, 29,053, 54. The wave screen will offer some resistance to the tidal water, but will not heap the water up within, 29,058, 59. A principle of its projection is, being found in the core of the tide, 29,060. If a site could not be found on the east coast adapted to his scheme, it would be the exception, not the rule, 29,065. Can find plenty of places on the east coast where the wave screen can be applied to perfect refuge harbours, 29,073.

Bastow, Samuel, Engineer and Contractor. Remarks on the wave screen; description of structure and cost of Margate Pier, 29,076–89. His object is chiefly to show the facility of construction of the screen, 29,090. Difference of his plan from Mr. Calver's, as to materials, placing, and cost, 29,091–108. Explanation of various details, 29,111–19. Is not aware of appreciable corrosion in ships' bottoms, 29,122. His tubes would not corrode if properly coated; the coating would last 60 years, 29,124–28. Placed in six fathoms low water, his tubes would resist any sea, 29,132–37. It would be comparatively smooth water on the lee side of his screen when it was dangerous on the weather side, 29,141–43. Equal intervals is a good proportion of open space to solid material; would propose no other until the effect had been tried, 29,144–46. There is no doubt as to the durability of iron under water when properly coated, 29,147–57. His tubes are adapted to six-fathom water, and are made of half-inch boiler plate, 29,158, 59. The feet, which rest on the bottom, at varying distances from the tubes, according to the depth, will be fixed by a diver, 29,172–76. Half an inch of wrought iron would last more than 100 years, 29,177. Explanation of method of construction, and delivery of plans and estimates, 29,178–89.

Taylor, Thomas John, Mining Engineer. Reads an appendix to his report on the improvement of the Tyne, arriving at the conclusion that the local improvement of the ports within the bay is preferable to the construction of a general harbour of refuge, 29,192. Agrees with Mr. Walker, especially as to depth of water at entrance of proposed piers, 29,194. Thinks the present bar at the Tyne would be removed by the extension of the piers, 29,195–98. Anticipates happy results from the improvement of the river, 29,201. Mr. Walker's piers at the Tyne would save more life and property than a harbour anywhere on the coast. 29,208. A breakwater at the mouth of the Tyne, exposed to a north-east sea, could hardly be constructed so as to afford shelter, and would be less effectual and more costly than the extension of the piers, 29,213–17. Explanations of proposed piers, and on expected depth of water at the Tyne, 29,219–23. His piers will cause all the sediment to be scattered, 29,225, 26. The Tyne bar is a sand-bank, and a continuation of the Herd Sand, 29,227. The piers certainly would not cause a bar of seven feet where there is now 38 feet, but they might carry out a bar of 27 feet, 29,229. This would be outside the piers; 19 feet is the assumed depth of water between the piers, 29,231–34. This depth might be maintained up to Shields, 29,241, 42. Three-fourths of the vessels lost in the Tyne might have been saved if these piers had been constructed, 29,243–50. Freshets are more frequent in westerly winds; they run out during the ebb from 2¾ to 5½ miles four or five times a year, 29,253–60. Freshets with an easterly gale of very unfrequent occurrence, 29,266. Has known 1,250 vessels in the Tyne at once; when the docks are completed there will be room for 2,000, 29,268–72. One harbour only would require an immense space; room for 500 vessels at anchor would be insufficient, 29,273, 74. One design for Hartlepool was was 150 vessels, which is insufficient for the wants of the coast, and an argument why the existing harbours should be improved; there is no need of a harbour further south, 29,275–82. Besides the Wear, Tees, and Tyne, would extend the improvement to Blyth, where valuable works are already constructed, 29,283–86. With a view to improve a bar, the upper parts of a river should be also improved; rivers should be treated as a whole, not as a part, 29,289–91. Obstructions to the tidal flow in the river Tyne, which should be removed, 29,294–304. The bar at the Tyne is caused by the drift along the beach, and without the river would form a continuous sand from the Herd Sand to Tynemouth Rocks, 29,306. A passage through the bar could not be maintained by a river current, 29,307, 08. The extended piers will have inner works to conduct the current, 29,309. Places no dependence on shelter in a harbour within the pier basin; it would make a beaching ground; the security for vessels is in the harbour and docks, 29,313, 14. The depth at the new quay at Shields might be obtained at the pier heads, 29,315, 16. Means that would be necessary to maintain the river "in train," 29,317–19. Engineering skill might be as equally successful at the Tyne as at the Clyde, and public funds might be fairly expended on the experiment, 29,323, 24. The drift of material at the Tyne is from north to south; had there been no river Tyne the Herd Sand would have covered the whole bay, 29,328–34. The river scoops out a passage to the sea; more power is wanted to drive the passage through, 29,340–42. The farther the promontory went to sea the greater time would be spent in further accumulation along shore, and if the entrance went out into deep water, silt would accumulate so slowly as never to injure the navigation, 29,348, 49. Perfect river action cannot be maintained, and accumulation of sand would result, if the south pier be shortened, 29,352. The deep channel will be of regular width when the river gets "in train," but to effect that there must be two piers of regular width, 29,353–57. Character of the inner works requisite to maintain a depth over the bar, 29,358–67. Training walls are necessary for the improvement of the Tyne, 29,368, 69. The great floods in the Tyne generally occur with westerly winds; sometimes from melting of the snow, 29,373, 74. Explanation of statement in report as to number of wrecks in the Tyne Bay, 23,379, 90. Training walls would gain depth, a useful dimension of section instead of one comparatively useless, 29,395. Rate of tidal wave in the Tyne, Thames, Humber, Orwell, and on the Northumberland coast, 29,399–404. Discharge of the Tyne during freshets, 29,405, 06. With the piers run out to 20 feet depth there will be no breaking sea outside the pier heads, except in heavy gales, 29,407–10. The improvement of the river must proceed simultaneously with the improvement of the piers; if the Government spend a large sum of money in making a harbour of refuge, the River Commissioners should be bound to increase and maintain the depth of the river, 29,416–21.

Cowen, Joseph. 200,000*l.* to 300,000*l.* would be spent by the Tyne River Commissioners during the construction of the piers in maintaining the depth of the bar; the revenues of the river must be devoted to its improvement, 29,422–48.

Abernethy, James, Civil Engineer (re-examined). Produces a model of his proposed mode of constructing breakwaters, and reads a statement of its assumed advantages over existing works of a similar description, as to rate of progress, economy of material, less cost, and greater durability, *pages* 904–906. Verbal explanations of the method of construction, 29,433–57. The long slope of all breakwaters must be faced between high and low water, 29,458–63. Advantages of his proposed system of building from the bottom; the long-slope system should be abandoned as a general rule, except in shallow water with a percussive sea, as at Aberdeen and Haslar, 29,464–76. Further explanation as to construction, 29,482–500. Comparison of his method with other cases, 29,501–12. By using large masses of masonry much time would be saved, and the work would be sooner out of danger, 29,514–18. Comparison of cost between this method and that at Holyhead, 29,519, 20. Imperfections of the work at Holyhead, 29,521–29, 29,599, 600. Rate of progress attainable; further explanations of method of construction, 29,530–69, 29,581. Quality and cost of materials to be used, 29,570–90. Explanations of plans formerly proposed, 29,602–11. Reference for the use of hydraulic machinery, 29,620–24. Reason of the success of the pile piers at Silloth, 29,628–35. Further technical explanations, 29,642–60. Estimated cost of the rubble, 29,661–65. A mere rubble mound without masonry is expensive from the quantity of material required, and would not be durable, 29,666–68. Explanation as to the rate of progress, 29,669–80.

Glover, Rev. *Frederick*. Reads a statement in support of his allegation that the formation of island breakwaters at the mouths of tidal rivers would prevent the formation of bars, 29,683. His proposition is to raise the sand at the mouth of a river into an island by assisting its formation; there would be no danger of a bar impeding navigation, 28,684. His theory suggested by works and effects at Dover and Southwold, 29,686–707. The island principle applicable to all harbours as a general principle, 29,708. The system is applicable to Smithwick Sand and Yarmouth Roads, and he proposes it for the Tyne, 29,710, 11. Mr. Walker's works for the Tyne would not be efficient; the bar would form as it does now, only farther out; examples at Lowestoft and Sunderland, 29,713, 14. Projecting piers at the mouth of a tidal river will form a bar, 29,715. Mr. Walker's piers will be mischievous, unless the opening be defended by an island, 29,718. There would be a trifling formation, but the island would prevent the water at the Tyne's mouth being affected by the violence of the ocean, 29,719, 20. Proposes to construct an island seaward of the bar now at the mouth of the river, 29,721. The detritus will form a small spit north or south of the island, according to the direction of the wind and tide, 29,722–30. When the island is made there will be a constant stream of water through, 29,736. If continued winds cause a formation, it will waste away afterwards with contrary winds, 29,737, 38. Explanations as to the travelling of the shingle at Dover, 29,741, 48. Statement of the nature and cost of the work proposed by witness for Dover, 29,753–56. His plan commended by Mr. Peto, 29,757. Did not object to the Commissioners' plan, but preferred his own manner of construction, 29,758–60. The works going on at Dover are a useless expenditure of public money, 29,761. His views as to carrying out his plan have been confirmed by Colonel Jackson, 29,763–65. Objections to the works at Dover, 29,766, 67. Remarks on rivers with islands and no bar, 29,768–73. His plan is applicable to all rivers, 29,774. Description of his proposition for making an island at Wexford, 29,777–91. His plan is applicable to the Tyne, but was not entertained by the River Commissioners, 29,792–94. Had not seen either the Tyne or Wexford, 29,795, 96. Objects to "permanent," that is, stone works, 29,799. Knows no works resembling his in England or abroad, 29,800. Erecting wooden instead of stone works would do more to benefit the present generation, 29,802. The works at Dover, which will cost ten millions, might have been done for half a million, 29,804. Reasons for his expectation that no bar will be formed by the establishment of an island breakwater, 29,806–14. An island will not prevent sand coming from the south until the south side is close filled up, 29,815–18. Anticipated effects of the wind on the tides and currents, 29,819–42. Reasons why the sand will not fill up the entrance between the island and shore, forming a double bar, 29,843–45. The stream north and south would keep the channel inside the island open at all times; under adverse circumstances the tendency to form a bar would be at the ends of the island, 29,849–56. A bar is not formed by the flood tide, 29,857. Why the ebb tide will not run out from the two entrances, 29,858. The flood will go out where the water is lowest, but will not flow in at one end, 29,859, 60. Remarks on river with several entrances found by sand-banks, 29,861–66. The Tyne would be not less clear with two openings than one; if the sand at the Tyne is met by a less current than it is now, a bar will not result, 29,868–74. Description of his proposed structures for Dover, 29,875–80. Islands at the mouths of rivers necessary and useful, 29,881, 82. Isle of Wight a strong case in point; were it removed there would soon be a bar in Southampton Water, 29,883–92. An island at the mouth of a river is to get an entrance at all times and in all weathers, 29,896. Objects to the doctrine of scours; bars are oftener formed than removed by backwater, 29,897, 98. With his plan at Southwold there will not be the same bars or hindrances as at present; the bar anticipated will be a large spit, rather than a transverse accumulation, 29,911, 12. Further explanations as to the effect of the wind and tide at the Tyne, 29,913–24. With his plan the direction of the channel would be usually good, 29,925–31. In the case of the Tyne his system would give a good entrance to the north, 29,932. Whatever depth was made would abide, 29,933. His cradle could be made tight enough to prevent the ballast being washed away; if any particles escaped they would be washed back again, 29,934–36. The importance of backwater is exaggerated; instances Wexford, 29,937–39. Explanations as to mode of construction, 29,942–52. An island off the Tyne would improve the river so as to give ships egress and access at all times of the tide, 29,954. The breakwater should be as close to the shore as to leave sufficient refuge area for shipping, 29,959. Would place it half a mile from Tynemouth Castle; it would extend a mile to the south and half a mile to the north, 29,960–63. With south-east and north-east winds vessels could run behind it perfectly well, 29,964–77. When the work was constructed the condition of the river would change; the stuff would be dredged out, and would not re-form; there would be deep water where there is now shoals, 29,978. The sea would never be so violent as now, 29,980, 81. Remarks on the harbour at Wismar, 29,983–85. Further explanation as to the method of constructing and placing his solid work, 29,992–30,034. The concrete blocks must be placed by divers, 30,042–48.

Gibson, John, Superintendent to Mr. Johnson, of Gateshead. Description of the nature of the screw-pile principle and its application to sea works, with instances of its working at Gunfleet Sand Lighthouse, Chapman's Head Lighthouse, and at Spit Bank, Cove of Cork; the time occupied in the work, and the times of the year available for working, 30,051–198.

Scott, Michael (re-examined). Description of the mode of facing his timber and rubble breakwater, so as to form a permanent stone structure; explanation of various technical details, 30,199–259. Description of the "wave screen," with explanation of details connected with it, 30,260–93. Remarks on the rate of progress and the cost, with comparative tables of the old and new systems, and further explanations, 30,294–340.

LONDON, JOHN. *See* WHITBY.

LOWTHER, WILLIAM. *See* SWANSEA.

LUMGAIR, —. *See* DUNDEE.

LYON, JOHN. *See* BRIDLINGTON.

LONDONDERRY (Witnesses examined at):

Stewart, Abraham Harvey, Secretary to Port and Harbour Commissioners. A harbour of refuge near the mouth of the Foyle would be very desirable, but is not prepared to recommend Portrush, 4670. Flats have been dredged, lights erected, and buoys stationed in the river in the last 10 years, 4682. There is a sufficiency of lights and beacons in the river, 4696. A pier run out from Warrenpoint would prevent the flow of the tide inwards, 4705. A graving dock is being constructed, for which great want is felt, 4722, 4726. If a harbour of refuge were made at the Skerries, a better class of pilot boats would be used, 4867–4870.

Lindsay, Alexander, Port and Harbour Commissioner. A harbour of refuge at Portrush would not interfere prejudicially with the trade of Derry. It would be of advantage generally to ships, 4733, 4734.

Mann, John, Port and Harbour Commissioner. A harbour of refuge at Portrush would be injurious to the trade of Derry, if a passing toll were laid on steamers, 4739. Considers a harbour of refuge highly desirable, but objects to the principle of a passing toll, 4744, 4745.

Mehan, John, Port and Harbour Commissioner, 4748, 4749.

Hatrick, Samuel, Shipmaster. A breakwater closing the west sound or the north sound at the Skerries would not make smooth water inside, 4769. Does not consider the Skerries a safe place to anchor at, 4780. Loughingdall is a middling good harbour; is very good holding ground all over the anchorage, 4786–4788. Lough Ryan is a very good harbour, 4794. A harbour of refuge at the Skerries would be very desirable, but doubts if the sea could be kept out, 4798, 4799. Does not know of any place better suited for a harbour of refuge than Portrush, 4800. A pier run out from the Saltpans would be a benefit for ships, 4804.

McDaid, James, Pilot. Carnashamra Bay in Lough Foyle is good holding ground, 4826. Eight or ten fathoms depth, 4828. Never saw any vessels anchored there from stress of weather, 4830.

McDaid, Philip, Pilot. There is no anchorage between Dunmore and Innishowen Heads, 4856–4858. A pier run out from Warrenpoint would be a shelter from west and north-west winds, 4862.

Gillespie, John, Pilot. Lough Ryan and Lamlash are good places; vessels often take refuge there, 4784–4788. The Skerries are a good anchorage, but prefers Lamlash, 4881. The broad sound should be closed before the west sound, 4884. There is no anchorage between Dunmore and Innishowen Heads, 4892.

M‘ALLISTER, ALEXANDER. *See* PORTRUSH.
M‘ARTHUR, JOHN. *See* LIVERPOOL.
M‘BRIDE, ALEXANDER. *See* BELFAST.
MCCAN, —. *See* WEXFORD.
M‘CLANE, JOHN. *See* BELFAST.
M‘CLENNAN, WALLIS. *See* LIVERPOOL.
M‘DAID, JAMES. *See* LONDONDERRY.
M‘DAID, PHILIP. *See* LONDONDERRY.
M‘DARMAID, ARCHIBALD. *See* LIVERPOOL.
M‘LOUGHLIN, MICHAEL. *See* BELFAST.
MACDONALD, JOHN. *See* DUNDEE.
MACE, EDWARD. *See* NORTH SHIELDS.
MACGREGOR, DONALD *See* LEITH.
MACKENZIE, COLIN. *See* PETERHEAD.
MACKENZIE, THOMAS. *See* REDCAR.
MACKIE, DAVID. *See* MONTROSE.
MACKIE, JOHN. *See* WICK.
MACLEAN, JAMES. *See* PETERHEAD.
MAGOWAN, —. *See* PORTRUSH.
MAIN, HUGH. *See* GLASGOW.
MAKINSON, FREDERICK. *See* WHITBY.
MANDELL, JOSEPH. *See* LIVERPOOL.
MANN, BENJ. *See* LEITH.
MANN, JOHN. *See* LONDONDERRY.
MANSON, DONALD. *See* PETERHEAD.
MARSHALL, ROBERT. *See* DOUGLAS.
MARSHALL, T. *See* HULL.
MARTYN, EDWABD SILAS. *See* PADSTOW.
MATHER, JAMES. *See* NORTH SHIELDS.
MATHIESON, JAMES. *See* PETERHEAD.
MAY, PATRICK. *See* WICK.
MAYCOCK, JOSEPH. *See* HULL.
MEHAN, JOHN. *See* LONDONDERRY.
MEIK, THOMAS. *See* SUNDERLAND.
MENZIES, JOHN. *See* HARTLEPOOL.
MERRYWEATHER, GEORGE. *See* WHITBY.
MESSENT, PHILIP JOHN. *See* NORTH SHIELDS.
MEYER, C. *See* PETERHEAD.
MILNER, WILLIAM. *See* DOUGLAS.
MITCHELL, JOHN. *See* GLASGOW.
MITCHELL, SAMUEL. *See* WATERFORD.
MONTROSE (Witnesses examined at Aberdeen):

Burns, Adam, Solicitor, Secretary to Harbour Trustees. Lodges papers, and states views of Harbour Trustees of Montrose. Existing harbours should be improved rather than new ones constructed. Opinions of eminent engineers on Montrose Harbour; its capabilities; no accumulation at the bar; proposed improvements; not yet accomplished for want of funds; 50,000*l.* already expended upon dock by local trustees, *page* 84, *ques.* 2655, 2656. Depth of entrance to Montrose Harbour; rise and fall of tides, 2657–2662.

Burn, Capt. *John*. Improving the existing harbours would benefit the shipping interest more than constructing one new harbour of refuge, 2678. The depth of Montrose Harbour could be easily increased, 2686–2689.

Napier, Thomas, Provost of Montrose, Shipowner. New harbour of refuge not required on north-east coast of Scotland, 2693. Great necessity for some accommodation for the fishermen at Wick; Fraserburgh is unsuitable for a harbour of refuge; at Peterhead it is not required, 2704–2707.

Mackie, David, Shipowner, Trustee of Montrose Harbour. Concurs with Provost Napier's evidence, 2710–2712.

Walker, D., Shipowner, Trustee of Montrose Harbour. Concurs generally with Provost Napier's evidence, 2717–2719.

MOORE, A. *See* BRIDLINGTON.
MOORE, EDWARD. *See* DOUGLAS.
MOORE, ROBERT JOHN. *See* DOUGLAS.
MORGAN, JOHN. *See* ABERDEEN.
MORRIS, CHARLES. *See* NORTH SHIELDS.
MOSSMAN, WILLIAM OGILVIE. *See* HARTLEPOOL.
MURRAY, JOHN. *See* WATERFORD.

NAPIER, THOMAS. *See* MONTROSE.
NEISH, JAMES. *See* DUNDEE.
NEISH, THOMAS. *See* DUNDEE.
NICOL, ALEXANDER. *See* ABERDEEN.
NICOLL, WILLIAM. *See* DUNDEE.
NOBLE, ALEX. *See* SUNDERLAND.
NOBLE, CHARLES. *See* LONDON.
NORTH SHIELDS (Witnesses examined at):

Mather, James, River Tyne Commissioner. Hands in a memorial from the seamen of South Shields, in favour of improving the Tyne, the Wear, and the Tees, in preference to making one harbour of refuge only, *page* 363. Statement of the trade of the Tyne and ports along the coast, showing its importance; more maritime property afloat belonging to the Tyne than to the kingdoms of Scotland or Ireland, 13,827–31. Statement of the prevalent winds and wrecks on the coast, showing the greater need of a harbour here than to the southward, 13,834, 38. One should be made here or at the Wear, but others also, 13,848. The trade of Hartlepool has declined through the greater facilities for shipping at the Tyne and Wear, 13,849–52. The Board of Trade returns are imperfect, 13,853–65. It is the opinion of seafaring men, and his own, that the ports of the Tyne, the Wear, and the Tees should be so improved as to be accessible at all times of the tide, 13,866–68. Abstracts of wreck returns are not sufficient for practical purposes; further details ought to be published; the expense would be justifiably incurred, 13,882–97. There is more chance of safety at the Tyne than at the other colliery ports, 13,904. Nothing would induce vessels to run for Hartlepool, 13,905.

Messent, Philip John, Engineer. Statement of the works at the mouth of the Tyne, 13,929, 30. The bar now is deeper than is shown on the plan, 13,933–35. Works can be carried on more rapidly, if necessary, 13,936–42. The works so far have stood the weather well, 13,949. By great exertions the works could be finished in 1862, 13,961.

Cowan, —, Chairman of Tyne Commissioners. Has nothing to add to his evidence given in 1857, 12,957. The works in progress are calculated to succeed, and the estimate is sufficient, 12,961, 62. Public money should be divided among the harbours of the Tyne, Wear, and Tees, 12,963, 64. The locality should contribute equally with the Government, 12,966–68. A single harbour of refuge would not meet the requirements of this coast, 12,969–76. The bar is the cause of wrecks, and the works in contemplation will remove the bar, 12,977–81. And there will be more depth inside, 12,982. A harbour of refuge at Filey Bay would not answer, nor at Tees Bay, which would silt up, 12,984, 85. Tynemouth Harbour will not silt up, 12,986, 87. Further contracts are stopped by want of sanction of the Admiralty, 12,995–98. The works already constructed have deepened the bar two feet, 12,999–13,002. Improving the present harbours would tend more to save life and property than constructing one large harbour, 13,003. For the estimated cost, 800,000*l.*, half to be paid by the Government, a harbour of refuge would be made at the Tyne that ships of any size could take in a gale at low water, 13005–08. Dock accommodation, 13,009–14. Proposed harbour would not be sufficient for the north-east coast; there should be another near Tees Bay or Sunderland, 13,017–19. Improving these three places all that is necessary, 13,020. Even were a harbour made at Filey, the tidal harbours should be improved, 13,021, 22. Financial statements, 13,023–34. The dredging has been successful, 13,035–40. With pro-

posed improvements, ships of all sizes can be accommodated, 13,042–45. The sand is gaining on the pier outside, 13,059. The south pier has cut away the Wheal, 13,064. Part of the nine-feet bar has gone, 13,065. Would spend all the money in improvements between the Tyne and Tees, 13,069–72. Vessels require harbours of refuge at their ports, not where they are caught by storms, 13,073, 74. Dues and financial matters of the corporation of Newcastle, 13,795–823.

Straker, Joseph, Shipowner and Coal Merchant. Improving the harbours on the coast will be much more beneficial than constructing one large harbour; ships would pass it and come to the ports they are bound to, 13,083, 91. There is good anchorage at Longhope, 13,104. The water at the Tyne is already improved, 13,114. The piers will be highly satisfactory, 13,116–19. Masters will make for their own port, 13,120. Bridlington Bay has great capability for a harbour of refuge, 13,128, 29. Hartlepool Bay is shoaling, and will continue to shoal, 13,133. One harbour will be insufficient, 13,135. Prefers a harbour at a promontory, 13,136. Most money should be laid out on ports which have the most trade, 13,137. The Humber is a good place of refuge, 13,138. Collisions from the crowd of vessels there an argument for more harbours, 13,142, 44. Many lives might have been saved at Shields by Mr. Cowan's proposed harbour, 13,150. If the piers are carried out the water will be smoother, and life and property saved, 13,153–61. Improving the present harbours would be more beneficial than constructing any single harbour of refuge, 13,170. Does not think a harbour south much wanted, 13,171–73. A harbour at Filey or Flamborough would not tend to save life and property; ships would persevere in running for their own ports, 13,174–78. Not many vessels run for refuge to the Tyne, 13,181. Less for Hartlepool, 13,184–86. A harbour at Hartlepool would be of but little advantage; reasons why vessels prefer the Tyne, 13,187–89. The land near the Tyne is easier to make than Hartlepool or Sunderland, 13,192–96. Some improvements should be effected on the east coast of Scotland for the fishermen, 13,197–200. Sailors will run for their own ports, and money should be spent at such places as they will run for, 13,202, 03. Vessels are risked to save ballast dues, which are heavy at the Tyne, 13,216, 17. If there were a harbour of refuge vessels would not avail themselves of it, therefore existing harbours should be improved, even fishing stations, 13,226–33. Piers already constructed at the Tyne have had a beneficial effect, 13,247. Although no river harbour has been made accessible at low water, would still wish for refuge harbours at the Tyne, the Wear, and the Tees, 13,248–54. Kingstown is a good refuge harbour, but is not a conclusive argument against improving river harbours, 13,255–58. Ships from the coal ports are well found, well provisioned, and sufficiently manned, 13,261. Majority of wrecks occur in taking harbours, 13,263. Facilities for repair advantageous at a refuge harbour; they will not necessarily follow the construction of one, 13,265–70. More regard should be had to laden colliers than light ones in placing a harbour of refuge, 13,290. Even with a harbour at Filey or Hartlepool, vessels would generally run for the Tyne, 13,298–301. A harbour near Flamborough Head would be of service to leaky vessels, 13,313. There is greater difficulty in getting out of Filey than out of the Tyne, 13,321–23. The demand for steam towage at harbours of refuge will not be supplied, 13,324. Many captains never go near Hartlepool, 13,328. If an additional harbour were to be made at Hartlepool or Filey, would prefer Filey, 13,334–41. If the piers were carried out ships could come into a river harbour at low water, 13,344. The piers would cause sediment to be washed away, 13,346–48. Prevalent winds in the North Sea, 13,349–55. The scouring power is very great in the Tyne, 13,356. Decidedly favourable results already from the pier at the mouth of the Tyne, 13,357.

Poppelwell, Matthew, Lloyd's Surveyor for the Tyne. Widewall Bay, in the Orkneys, the best harbour for a ship bound for Liverpool through Pentland Firth, 13,373. Wick is an excellent site for a refuge harbour, 13,376–78. Filey would make a good harbour of refuge, and improving Hartlepool would be advantageous, 13,380. There should be one harbour at Filey, and the other harbours improved, 13,381. The immense trade is the cause of wrecks at the Tyne, 13,387. Prefers Peterhead or Widemouth Bay to Wick, 13,403–05. Improvement of the present harbours would save more life and property than any single harbour, 13,409. Were a harbour not constructed at the Tyne, there should be one between Hartlepool and Seaham, 13,423–26. Hartlepool would be a better place than Filey, 13,427, 28. The more harbours the better, 13,429. Facilities for repairing at the Tyne, 13,430–32. Great traffic at the Tyne and neighbourhood, and the necessity for a refuge, 13,433–41. Improving existing harbours the best mode of providing it, 13,442. Vessels would take the Tyne in preference to Hartlepool, 13,444–70. Wick would be convenient to a vessel caught in a south-east gale in the Pentland Firth, 13,456–61. Firth of Forth sufficient for the Baltic trade, 13,469. Masters of colliers would run for Filey in preference to Hartlepool, 13,482. Filey is better marked than Hartlepool, 13,499. Better facilities for repairs at the Tyne than anywhere else, 13,511.

Greenhow, Conrad, Master Mariner. Prefers improving the existing harbours to constructing one sole harbour of refuge, 13,516, 17, 13,693. One harbour would be insufficient for the number of vessels resorting to the Tyne, 13,518. Peterhead is the best place for a harbour between the Firth of Forth and Pentland Firth, 13,529–30, 13,573–75. The Firth of Forth is a capital harbour of refuge, 13,537. Difficulties of Pentland Firth, 13,550–57. Objections to Wick; difficulty of getting out of the harbour; it would not be used as a convenience, 13,561–65. Prefers Hartlepool to Filey; a harbour should be north of Filey, 13,566, 67. Would be chary of running into Hartlepool in thick weather, 13,572. Nine-tenths of the casualties on the coast would have been prevented had there been good access to the Tyne, Wear, and other ports, 13,580. Mr. Walker's scheme will give from 23 to 25 feet water, 13,587–90. When the piers are narrowed there will be as much sea water as now, 13,591. No one harbour would be sufficient; three would be, 13,593–97. Filey is the best land to make, but Hartlepool the best situation, 13,598. Would prefer a harbour further away than Hartlepool; there is Redcar, 13,599–601. No silting up in the Tyne, nor accumulation of sand near the new works, 13,603, 04. A harbour of refuge on the Tyne would save much life and property, 13,606. Instances of wrecks, 13,609. Many vessels are caught off Flamborough Head, and run back hither, 13,615. Vessels would not leave the port with a bad prospect, as they do now, if there were piers, 13,617. More laden than light vessels lost, 13,621. Losses are chiefly in taking the harbour, 13,623, 24, 13,687. Wanting a harbour here, ships have been driven as far as Flamborough Head and the Firth of Forth, 13,625. Ships prefer Leith Roads to Shields, 13,628. A harbour on the east coast of Scotland would save life and property, and promote trade, 13,630–33. Prefers Peterhead to Wick or Fraserburgh, 13,635. A harbour at the Isle of Man would be useful, but is not necessary, 13,642. A harbour for supplies might be made at Buchan Ness, but the anchorage there is bad, 13,645–47. Good anchorage between Peterhead and Buchan Ness, 13,648. Vessels would avoid the dangers at Wick, 13,653–55. A harbour at Peterhead would be useful for all that coast of Scotland, 13,656–58. Not sufficient chance of wrecks off Peterhead to warrant the making a harbour there, 13,661. A harbour at Wick would be useful to fishermen, 13,662. Fishing boats are more in danger of wreck east of Wick than near Peterhead; not ships, 13,670. If this port were deepened to 15 feet, danger would be obviated for light vessels, but not for laden ones, 13,681. Laden ones should be considered first, 13,684. Supplies for ships not likely to be sold where new harbours are constructed, 13,692. For one harbour only, would select the largest site,—Redcar or Hartlepool, 13,695, 96. A harbour at Peterhead would be a great boon to the Baltic and Archangel trade, 13,719. The depth of water required now is sufficient for the coal trade, but not for the foreign, which is increasing, 13,729–32. There would be more room in Hartlepool Bay than in Filey Bay, 13,733, 39. And, with proposed extension of the piers, there would be more room in the Tyne than in Hartlepool Bay, 13,742. A single harbour must hold 500 vessels; if the Tyne was improved that number could be accommodated, 13,755, 56. There is no fear of silt depositing, 13,759–63. Earthworks will make the current take a true direction, 13,764, 65. There would be more room at Hartlepool than Filey, because laden ships would not make for the latter place, 13,785–89. When the piers are completed the current will scour out the channel, which alone will be a great benefit, 13,790–94.

Shotten, G., Master Mariner. A harbour of refuge at Peterhead is not necessary, but would be a great

advantage to Archangel and Baltic trade, 13,984–87. The Firth of Forth is a good roadstead in easterly gales, 13,988–92. It would be better to improve the Tyne, the Wear, and the Tees, than to construct one new harbour, 13,993–14,000. Shipmasters will rather run a risk to make their own port than put into a harbour of refuge, 14,001–06. For every reason, harbours of refuge should be where the trade is, 14,013. If a harbour be constructed, one should be made at Filey. Bridlington Bay is already a first-rate roadstead, 14,020. Advantages of Filey Bay, 14,022–25. Disadvantages of Hartlepool, 14,026. Peterhead better than Wick or Fraserburgh for a harbour, but would run to Long Hope in preference to either, 14,033–41. If the Tyne were made a harbour of refuge, many vessels would be saved; 20 have been ashore there at one time during an easterly gale, 14,044–50. The best spot between Flamborough Head and the Fern Islands is the Tyne, 14,051–55. Filey Bay is better for a harbour than Hartlepool; Hartlepool would soon fill up, 14,056–65. A limited sum should be spent in improving the Tyne, the Wear, and the Tees, and the constructing one which should be at Filey, 14,066–75. A large fleet is often caught about Flamborough Head, and would be glad of Filey for a shelter, 14,093, 94. Little loss of life at the Tyne, because of excellent life-boat service, &c., 14,114–17. A harbour at Filey would save many vessels that would be otherwise wrecked, 14,132–39. A harbour at Wick for safety of life to the fishermen; Peterhead for convenience and safety of property, 14,148–50.

Wake, W., Harbour-master of the Tyne. Harbour of refuge at Wick desirable for the fishery, 14,157. One is not needed at Peterhead; the coast is sufficiently provided, 14,163–65. Better improve harbours between Berwick and the Humber than construct a new one, 14,168. Prevalent winds on this coast, 14,171–77. The Tyne bar is already lowered 2½ feet by the works in progress, 14,179–83. Extent of accommodation for shipping in the Tyne, 14,188. Many wrecks might have been saved had the piers been extended, 14,207. Few lives are lost because of the life-boats, 14,208. If the piers were extended to 30 feet at low water, there would be no silting, and that depth would be maintained, 14,211–15. Depth over the bars is increased by dredging; sand has accumulated on the inner bar, 14,229–39. Depth derived by dredging has caused the current to run truer; thinks it will not fill up again, 14,251–72. Steam tugs are as necessary as a good anchorage, 14,273–76. Dangers of vessels waiting for a tide to come in, 14,277–88.

Tully, Robert, Pilot. The proposed piers would facilitate the entrance of ships, 14,322. Tyne more easily made than the Wear or the Tees; more lights are not required, 14,331–44. Vessels from this port generally will found, and can withstand very bad weather, 14,355–66. Vessels caught on this coast generally run for the Tyne, 14,369–76. Many vessels have been lost in this neighbourhood, but few lives, owing to the life-boats; a harbour of refuge at the mouth of the Tyne would have prevented most of the wrecks, 14,377–85.

Wawn, John T., Shipowner. Necessity for a harbour at the Tyne; when the pier is constructed this will be accomplished; the south pier prevents the sand coming in, 14,392, 99. Better to improve the existing harbours than construct a new one, 14,393, 14,400–02. Tyne shipowners willingly pay the tax for improving the river, 14,403–07. There is no doubt increased accommodation will follow improvements now making, and that the piers will answer the purpose intended, especially the south one, 14,409–27.

Cay, Martin, Shipmaster. A harbour of refuge at Wick would be of advantage to the fishermen, 14,434, 501. There is no pretence for making one at Peterhead, 14,435. One harbour in this district would not be sufficient; Filey an eligible spot; advantages of the Tyne, 14,443, 14,450–58. Harbours are needed at the Tyne, Filey, and Hartlepool, especially at the Tyne, 14,459–73. If the improvements in the Tyne fully answer, that will form quite a harbour of refuge, 14,479. A harbour at Filey or Hartlepool should be capable of accommodating 500 vessels, 14,503–05.

Whitehead, James, Master Mariner. If but one harbour constructed, Redcar is the best site; it is preferable to Filey; but better to improve those existing than have but one; it would be too crowded, and captains prefer running back to their own port, 14,511–25. Tees Bay preferable to the Tyne or Filey; Redcar the best place; failing that, the Tyne, 14,527–33.

Morris, Charles, Shipmaster. Better improve several harbours than construct one, 14,544. Bridlington should be improved; much preferable to Filey 14,545–59. The Tyne the best site between Bridlington and the Fern Islands; Hartlepool is prefer, able to Bridlington if only one be made, 14,563–70.

Joblin, John, Shipmaster. Deputed to represent opinions of a number of seamen; improving the Tyne, the Wear, and the Tees would be of more use than constructing one large harbour, 14,595–614. If but one is made, Hartlepool is preferable to Filey, 14,617–28. Many vessels would run for the Tyne if the bar were reduced, and piers carried out, 14,629–39.

Crozier, James, Shipmaster. Agrees with Mr. Joblin that it would be better to improve the Tyne, the Wear, and the Tees, than to construct one large harbour; a refuge at the Tyne would do most to save life, 14,648–58. Filey preferable to Hartlepool in east-north-east gale, 14,659–61.

Kendlish, —, Pilot. Tyne and other harbours should be further improved, and a new one constructed at Filey, 14,670–80, 14,687. A harbour is necessary on the north-east coast of Scotland; Wick preferable to Fraserburgh or Peterhead, 14,686. There should be two harbours on the north-east of England,—one at the Tyne, the other at Filey, 14,687–707. Hartlepool, being in the bight, is inferior to Filey, where there is also a good beach, 14,708–12.

Mace, Edward, Shipmaster. Better make a harbour at Filey than improve the Tyne, the Wear, and the Tees; it should accommodate 700 vessels, 14,735. If only large enough for 300, the Tyne should be improved, 14,748–55. Danger of collision at entrances, 14,758. Improvements at the Tyne and Hartlepool would be of advantage to shipping, but for a harbour of refuge still prefers Filey, 14,773, 74. A harbour most desirable for laden ships, 14,779. Dangers off Hartlepool, 14,782–87. General feeling in favour of Filey, 14,812.

Gray, William, Shipowner. The Tyne, the Wear, and the Tees, being tidal harbours, cannot be considered harbours of refuge, 14,834. The depth of Hartlepool Bay the most eligible spot for one; Filey Bay not objectionable, 14,835. It is impossible to make Hartlepool, the Wear, or the Tyne, being tidal harbours, real harbours of refuge; not even with increased dock accommodation, 14,841–49; Hartlepool or the Tyne preferable to Filey, 14,854–56. Public money ought not to be expended on a tidal harbour, 14,857, 58. Final opinion in favour of Hartlepool, 14,860–67.

OGILVY, Sir JOHN. *See* DUNDEE.
OLDHAM, JAMES. *See* HULL.
ORD, T. B. *See* SUNDERLAND.
OWEN, J. *See* CARDIFF.
OXLEY, C. C. *See* REDCAR.

PACE, —. *See* REDCAR.
PADSTOW (Witnesses examined at):

Bryant, John Eger, Receiver of Wrecks, &c. Statement of the advantages of Padstow as a harbour of refuge, 9563. The coasting trade frequenting this part particularly requires shelter, 9565. Advantage that would result from lowering Stepper Point, 9566. The estimated expense is 40,000*l*., 9568. Of the many vessels wrecked the last fifteen years there were none that could not enter the harbour, 9588. Guide walls would keep the harbour clear, 9589. Dimensions of proposed anchorage, 9593, 9594. No other port to improve between Padstow and the Bristol Channel, 9595. Proposed method of constructing walls on the bank, 9609, 9610. The walls would cause a scour that would give a depth of 24 feet low water, 9614. Would incur the expense to make it a harbour of refuge for the coasting trade, 9628–9633. There is no fear of the drift forming another bar at the mouth of the harbour, 9638. The scour produced will carry away the Horse-shoe Bank also, 9642. A harbour of refuge should be made at or near Padstow, 9650–9653, 9685. Improvement of the channel by walls; the material to be got by cutting down Stepper Point, 9659–9677. Dimensions and materials of walls, 9686–9691. Borings, 9694–9700. Embankment could be carried on all the summer, 9708. Stepper Point must be cut down considerably to give a true wind in, 9715–9721. There will be no engineering works beyond the walls and dredging a bit off Stepper Point, 9746. More than 700 vessels annually take refuge in Padstow, 10,251.

Treadwin, John, Shipowner, &c. If Padstow could be made more available it would be a great advantage,

9750. The removal of Doom Bar is the great consideration, 9751. Found a hard bottom after boring at several depths, 9769–9775. The walls will drive the point off to the bar, and widen the channel, 9779, 9780. Narrowing the entrance would scour the sand and deepen the channel, 9785. Width of the channel does not vary at Stepper Point, but at the bar, where much sand accumulates, 9786–9788. There are no local funds available for improving the harbour, except from vessels using it for shelter, 9802. The outer point of Doom Bar is a great danger, 9823. A beacon there would be serviceable, but difficult to maintain, 9826. Great difficulty in keeping a beacon at the Ketch, 9838. Efforts of the Padstow Association in assisting vessels in distress, 9847–9856.

Hellyer, Richard Blake, Sub-Commissioner of Pilotage. The principal advantage to Padstow would be the cutting down of the point, 9863. By so doing it would save life and property, and benefit the shipping interest, 9865, 9866. Many vessels would now risk being wrecked rather than come to Padstow, 9870–9873. If altered as proposed the harbour would not be shunned, 9877. Two vessels cannot enter the channel abreast; when altered, it will admit ten, 9887–9890. Danger to vessels from the Doom Bar, which would be removed by the proposed alterations, 9900–9904. Great part of Stepper Point should be cut away, and the bar widened, 9905. Objections to St. Ives, and advantages of Padstow, 9911–9936. Difficulty of keeping a buoy on Ketch Point, 9938–9949. There is sufficient scour to keep down the bay if it were dredged away, 9976. Security would result from cutting down the point, 9980, 9985. By the construction of the guide walls part of the Doom Bar will be removed, which will greatly improve the harbour, 9997, 9998. Cutting down the point would be the greatest improvement that could be made at Padstow, 10,003–7. Baffling winds inside Stepper Point cause many casualties, 10,008, 09. The outer edge of Doom Bar should be removed, to widen the channel, 10,010, 11. Loss of a vessel and crew which a wider channel would have prevented, 10,012–18. The Padstow Association have saved many vessels, 10,028.

Horscwell, Nicholas, Pilot, &c. All that is cut away from the point will be advantageous, 10,039. More vessels would come here were the facilities greater, 10,040. Vessels have been lost through neglecting to take pilots, 10,041–43. Risk in running for the harbour in north-west gales, 10,044. It would be better if the Doom Bar were removed, 10,051–53. Would sooner run for a harbour here than at St. Ives, 10,056–64. A buoy on Ketch Point would be useless, 10,065–67. Shoals in the Bristol Channel are buoyed, 10,068, 70. Buoys would be useless on the Doom Bar, 10,071. Sea breaks right across the harbour in north-west gales, 10,072. The more the point is cut away the further vessels will get in, 10,082. If that alone were done it would be of great advantage, 10,084. Port Quin Bay seldom resorted to, though having a good anchorage, 10,086–88. If the Doom Bar were removed there would be a better entrance to the harbour, with a truer wind, 10,111–15.

Hutchings, Archibald, Master Mariner, &c. Improvements at Padstow would be of most benefit to the coasting vessels, 10,124. Most vessels trying for St. Ives would get ashore, when they might enter Padstow safely, 10,126. Baffling winds are a difficulty to persons who know the place, 10,128. Opinions are unanimous in favour of a central point, 10,131. When the port is altered as proposed a vessel of 2,000 tons can come in, 10,134–70. Padstow and St. Ives are the only places for harbours between here and Hartland Point, 10,140. Advantages of Padstow over St. Ives, 10,150–69. The Doom Bar must be removed, 10,176. No need of a harbour above Lundy, 10,177–79. One harbour of refuge is all that is necessary, and Padstow is the place, 10,187. The point should be cut away to where there is a fall in the land for a steady wind, 10,204–11. If caught in a south-west gale leaving Padstow, would run for Coombe and Penarth, 10,221, 22. Caldy an unsafe place, and incapable of improvement, 10,223–29. Shelter could be made at the Mouls, 10,230. Vessels running for shelter would prefer Lundy to Clovelly, even if improved, 10,237. A channel of 200 fathoms at Padstow would allow vessels to enter in safety, if the point were cut down, 10,239.

Martyn, Edward Silas, Farmer. Suggestions for improvement of the harbour at Padstow, 10,253–55. The breakwater suggested would be a desideratum, 10,269. Proposes to throw out a pier from Trebethrick Point, to prevent the sand accumulating on the bar, 10,295. Objects to the removal of Stepper Point, 10,303. The sand is harder on outer side of Doom Bar, 10,304. If his breakwater were made the channel would deepen, and vessels could find their way in the dark, 10,307. The loose sand travels over the Doom Bar and falls into the channel inside, 10,315.

Sherringham, Capt. *William Lewis.* The improvements of Padstow Harbour should be, the entrance, and the area of inner water, 10,321. It would be a positive mischief to remove the Doom Bar, 10,322. The more Stepper Point is cut down a truer wind will be obtained, 10,325. Forming a road along Stepper Point to throw a hawser from would be an insufficient improvement, 10,326. Guide walls will improve the present passage and tend to deepen the water, 10,327, 28. The banks must be dredged, 10,329. The breakwater proposed by last witness not so good a protection as the Doom Bar, 10,330–32. The most dangerous coast is from Land's End to Hartland Point, 10,335. St. Ives will be a most valuable harbour, but will not obviate the necessity of improving a harbour in a bay as at Padstow, 10,338–40. Padstow would never be a harbour for ships of the line, but something should be done for its improvement, 10,341–43. Sir F. Beaufort's opinion on the desirableness of improving Padstow, 10,344. The harbour at Padstow should be in the bight of the bay, not at the point, 10,346. Desirableness of buoys at Ketch, and in dangerous places generally, 10,347–49. The guiding walls will increase the scour, 10,350. If the walls are not made, the point should be cut down, 10,356. Vessels would then enter more readily, 10,357. The bar at Stepper Point is composed of sand, which would silt up again if dredged, 10,359–61. West bank of the Doom Bar should be more buoyed, 10,362. No reason why a buoy should not stand on the Ketch, 10,363. The idea of removing Stepper Point originated with him, 10,375. Stepper Point might be cut with advantage further than marked on the section, 10,377. The Mouls and Port Quin are both ineligible places for harbours, 10,384–86. A vessel would be safe ashore at Gun Point, 10,387–92. There is no more difficulty in making Milford Haven than any other part of the Channel, 10,399, 40.

Patten, Samuel. *See* Portrush.

Pattison, William. *See* Whitby.

Patton, David. *See* Belfast.

Paul, John. *See* Filey.

Paynter, Nathaniel. *See* St. Ives.

Penny, William. *See* Peterhead.

Peterhead (Witnesses examined at):

Anderson, Alexander, Preses of the Harbour Trustees and Provost of Peterhead. Statement respecting trade of the harbours of Peterhead; a harbour of refuge at Peterhead would possess all the advantages which the trade of the North Sea passing or nearing the east coast of Scotland could require, 1220. 105,000*l.* has been expended in cutting a communication between the two harbours, and deepening the north harbour, &c., 1221–1225. Natural harbours of Longhope and Kirkwall safe in all winds, 1233. A harbour of refuge at Peterhead would not have saved several lives lost, 1237.

Stevenson, David, Civil Engineer. Method adopted to ascertain number of vessels passing Buchan Ness and through Pentland Firth, as set forth in the tables published in the reports of Select Committee on Harbours of Refuge, 1857 and 1858, 1240. Design of his plan for a harbour of refuge at Peterhead might be extended by shifting the piers further seaward, whereby about 70 acres additional room would be obtained, 1243. The cost of enclosing 200 acres would be 335,000*l.*, and about 100,000*l.* more for enclosing 300 acres, 1246–1248; six to eight fathoms depth, 1249. There would be no difficulty for a vessel to take the proposed harbour in a south-east gale, 1250. Reasons why a central entrance to the harbour better than one at each end, 1252. A breakwater made with a curved line would give greater anchorage ground, but the curved form would not break the force of the wave, 1253, 1254. The north harbour is deeper than the south harbour, 1255. The improvement of Wick Harbour would be of great importance to the fishings there; the harbour would to some extent be useful as a harbour of refuge, 1260. North-east gales send in heavier seas than the south-east at Peterhead, 1262. The south bay of Peterhead is protected in north-east gales, but open to the south-east, 1263, 1264. A breakwater, leaving a passage to the north and another to the south, would afford protection against east and south-east gales, but to obtain this it must be carried too close to the rocks, 1265, 1266. A breakwater would not cost more than proposed piers, and would enclose about 40 acres more space, 1268, 1269. A harbour of refuge at Peterhead would be more useful than at any other part of the east coast of Scotland, 1276. Peterhead a far better place for a national harbour than Fraserburgh, 1279. Facilities for constructing a harbour at Peterhead, 1281–1284. The proposed harbour would have a depth of eight fathoms under the line of piers, 1313. Vessels would be able to take the entrance easily, under adverse circumstances, 1319–1322. Method of constructing the proposed harbour, 1326–1328. Material would be found about two miles from the town, 1331. Underwater rubble only might be obtained at Fraserburgh, 1344. Outside dressing of stones for the harbour of no importance, 1356. Off the bay of Peterhead the tide runs about three knots an hour; the main stream of the tide runs without the bay, 1358. Further explanation of plan of proposed breakwater; no parapet would make it safe to pass along the north pier in bad weather; uselessness of expending money on a parapet, 1925.

Burnett, Peter, Shipmaster. Nine-tenths of the vessels entering harbours of refuge do so, not from stress of weather, but as wind-bound ships taking shelter when the wind is against them. In the coasting trade most vessels pass the eastern promontory of Scotland, and that is where the greatest number of vessels meet, coming from both south and north. In coming along the land and approaching Peterhead in any direction, seamen will have the wind west-south-west south of Buchan Ness, west off Peterhead, and west-north-west as soon as they have opened out round Rattray Head. Has frequently seen 60 or 70 vessels at anchor in Peterhead Bay during strong westerly gales; there is no other point of coast where so many vessels have congregated at one time. No other position on the coast from the Firth of Forth to Duncansby Head where a ship could get to sea with so many winds as from Peterhead Bay, or where a harbour of refuge would be of greater benefit, 1367. At Peterhead there is less sea strikes in than either north or south of it, as the strong band of tide across the bay runs the sea down before it enters it. Had there been a harbour of refuge at Peterhead in 1848, 57 of the 59 boats which were lost in that year would have been saved, 1368. The present harbour of Peterhead is the most suitable site for the necessary harbour of refuge, 1370. Peterhead is a general place of call for ships from Archangel, 1376. There is little or no tide in the harbour, 1378. Never saw a ship driving in Peterhead Bay; it is good holding ground, 1379. Has run a ship of 450 tons into Peterhead Harbour, the entrance being 100 feet wide; but should hesitate to do so with a small ship in a heavy gale, 1387, 1390. It is advantageous to have the entrance to a harbour out of the run of the tide, 1388. A powerful ship could get out of Peterhead Harbour with a strong gale blowing to east of proposed entrance, but a small ship would not, 1393. Scarcely any wind would lock a vessel in the harbour, 1394. The proposed plan is too small, 1397. A harbour of national benefit should be sufficient for a fleet to rendezvous in, 1399. Would prefer a harbour at Peterhead to one at Fraserburgh, 1401. Good anchorage ground in Peterhead Bay; no rocks, 1406, 1407. There are parts of the bay where a vessel can beach with safety, 1408–1412. An entrance to the harbour of 400 feet is ample in a gale of wind, 1421. The best anchorage in Peterhead Bay is nearly opposite Merchant Street, though now a little broken up from much use, 1435, 1436. Has seen 60 or 70 ships at anchor in the bay at one time during westerly winds, occupying a much larger space than would be enclosed within the piers, 1437–1441. If a harbour of refuge is to be made there it should be of larger extent than is proposed, 1443. If the piers had been built the vessels would have occupied less space, 1471. Vessels pass nearer Buchan Ness than Caithness, 1473. Large vessels seldom take a harbour of refuge, 1478. Such harbours most useful for vessels of 400 tons downwards, 1479. No difficulty in running through Pentland Firth, 1483. Would have no hesitation in running for a harbour like Longhope, though never there before, 1484.

Gray, David, Shipmaster. Concurs generally in the evidence of Captain Burnett, 1489. Has ridden out a heavy gale in Peterhead Bay with the wind from east-south-east in a ship of 360 tons, drawing 14 feet water, without the anchor starting an inch, 1493–1496. Other vessels have done the same, 1497–1500. No difficulty in passing through Pentland Firth with plenty of wind, but would contrive to go through by daylight, 1508, 1509. With a chart such as shown, there would be no difficulty in running for a harbour like Longhope, 1511. Would take a harbour of refuge in fair weather, but in foggy weather would keep the sea, 1513, 1514. An entrance to harbour of 400 feet sufficient, 1519–1521. Holding ground in South Bay very good, 1523–1531. A harbour of refuge here would be of great service, 1535. The depth of water on the north side of the bridge in Peterhead Harbour is 17 feet in high spring tides; in the south harbour not more than 19, 1536. It would be a great advantage to deepen the channel or wall of the south harbour, 1537.

Scott, Joseph, Master Mariner. Concurs in evidence already given as to eligibility of Peterhead as a site for a harbour of refuge, 1548. Reasons for preferring Peterhead, 1556. No difficulty in running through Pentland Firth if he could choose his own time; nor into Longhope Harbour, 1567, 1569. Soundings decrease more gradually off Peterhead than anywhere to the north, 1573. There are soundings of 60 fathoms 25 or 30 miles off Peterhead; off Wick about 45 or 50 fathoms, 1575, 1576. Many vessels take shelter in Longhope in westerly winds, 1586. Has run through Pentland Firth from the westward with a heavy gale and an ebb tide. Running through one night, got hold of Stroma, and kept his vessel there four hours; got through when the tide eased, 1587. Many masters would have tried the same thing, 1622. The depth decreases gradually approaching Peterhead, 1608. Would approach Peterhead in a fog by soundings, 1609. Peterhead is the easiest land to make on this coast by soundings, 1614, 1615. Soundings for Kinnaird's Head much the same as for Peterhead, 1616. The soundings on the south end of the "Dutch Bank" are of great service in approaching Peterhead, 1626. All the soundings spoken of by him were made by himself, 1629. Would not hesitate running into proposed harbour with an entrance of 400 feet, 1635. Would prefer a detached breakwater, such as at Plymouth, 1637. An opening into the harbour at each end of a breakwater would be best, 1640. The tidal wave off the south head forms a kind of breakwater, 1644. Therefore the piers should be placed just within the cushion of that tide, 1645.

Manson, Donald, Harbour-master and Captain Pilot. Peterhead the best place for a harbour of refuge, and such a harbour is necessary, 1661. It would be an advantage to have the depth of water in both harbours the same, 1670. But a harbour of refuge would be a greater advantage, 1672. The holding ground in South Bay is good, 1676–1678. Has been through Pentland Firth in all weathers, 1684. Has often been in Longhope, than which there could not be a better harbour in south-east gales, 1690, 1692.

Souter, Alexander, Pilot. The anchorage in South Bay is good, 1715. Concurs in evidence of Captains Burnett and Gray, 1717. Has seen Buchan Ness Light 25 miles off, 1721. It is a good point to make for, 1723. States the cause of the ship *Sarah,* of Liverpool, driving on shore on the head of the south bay, 2315.

Hepburn, Alexander, Shipowner. Concurs with other witnesses respecting Peterhead, 1732. Has often taken refuge in South Bay; it is safe anchorage, 1733, 1734. Remembers some large foreign vessels being beached in South Bay; the crews were saved thereby, 1740–1745. The refuge formed in the South Bay is held of great importance to the trade of the Moray Firth, 1749. A harbour of refuge necessary on this coast, and Peterhead the best place, 1756, 1758. Has been driven backward for three weeks between Gridleven and Somemouth, when he could get no place but Peterhead Bay, 1759. Would not prefer Wick to Peterhead for a harbour of refuge, 1764. A good harbour at Fraserburgh would be useful, but Peterhead the most suitable place, 1774, 1778. Has been through Pentland Firth when blowing hard, and found no difficulty, 1787–1790. Would not attempt Wick when blowing hard from west-north-west, 1796–1799. Would not hesitate to take the proposed harbour with an entrance of 400 feet, 1804, 1805.

Leslie, James, Civil Engineer. Report to Harbour Trustees as to the eligibility of South Bay for a harbour of refuge. Description and dimensions of proposed harbours; bay of Peterhead offers great advantages for the site, 1818. Proposed entrance of 400 feet sufficiently wide, 1821. The bay is too narrow for two entrances to the breakwater, 1822. The proposed piers cover the best anchorage, 1823. If money were forthcoming the works could be done in less than ten years, 1829. The shore of the proposed harbour is mostly rocky, 1831. The highest platforms will be 8 feet above high water, without a parapet, 1834, 1835. No one could go upon the piers during a gale at high water to give assistance to vessels in distress, 1837. The quarry whence the stone will be got is a large hill of granite close to Buchan Ness, two miles from the west end of the breakwater, 1842–1844. Better material could not be obtained, 1853. Is quite satisfied with Mr. Stevenson's section as a breakwater, 1854. The pier head must be rough-dressed, 1855, 1856. The pier head itself must be brought up as regular masonry, 1858. To make the piers accessible in a gale would require a parapet so high that it would not be advisable, 1867. It is better to have a large harbour without parapets than a small harbour with them, 1871. Cost of the proposed works, 1880.

Stuart, Alexander, Builder and Harbour Contractor. His prices lower than those of Mr. Stevenson, 1896. No difficulty in proposed plan, 1900. Would adopt a similar plan to that at Holyhead for the construction, 1904. Would allow the sea to make a natural breadth of base, 1909. The quantity of material in a breakwater would be greater than in proposed piers, at the same cost per cubic yard, with greater risk to the staging and plant, 1914–1916. There will be no difficulty in walking along the platform without a parapet, 1930. A parapet wall would be useless, as in bad weather, when most required, it would be unsafe to pass along the pier, 1936. Wick has claims for a grant of money as a fishing station, 1956. A harbour is also wanted between Port Gordon and Banff, 1962–1968.

Bruce, the Hon. *Thomas Charles*. Because of the great loss of life on the Banffshire coast, a committee was appointed to inquire into the cause, and the means to be taken to prevent a recurrence. Intention of the committee is to obtain a plan for a harbour on the most suitable part of that coast, 1976.

Penny, Capt. *William*. Letter from, testifying that Peterhead is the best locality on the coast for a harbour of refuge, *page* 61.

Young, William, Shipmaster. Has sometimes been unable to get into Fraserburgh, but got into Peterhead instead, 1982. Never had a pilot through Pentland Firth, and has passed it in a gale, 1986, 1987. Has often taken shelter in Longhope, 1988. Has been in Wick Bay when blowing hard from the south, but would not stay a night in it if he could help it, 1991, 1992. Has known of vessels being lost through mistaking the bay of Wick for the Moray Firth, 1999. Vessels can get hold of Peterhead more readily than Wick, 2000. Peterhead possesses advantages beyond any place on the east coast for a harbour of refuge, 2011, 2021. Vessels coming from the Pentland Firth would not go to Wick for refuge, 2013, 2014. Vessels driven from English coast seek refuge about Orkney and Peterhead, 2017, 2018. Vessels have driven from their anchors at Longhope, 2025. Would have no difficulty in running for Longhope by the Admiralty chart, 2028. Has gone through Pentland Firth against tide and with foul wind by working in the eddies, 2029–2035.

Jopp, J. F., Shipmaster. Baltic vessels call for orders at Peterhead, Leith, and Grimsby; they call first at Peterhead, if possible, 2049, 2050. There is no accommodation for shipping at Wick on account of the fishing boats, 2068. For general shipping Peterhead is better than Wick, 2069.

Meyer, C., Shipmaster. Agrees with Captain Jopp, 2080.

Joheneson, —, Shipmaster. Agrees with Captain Jopp, 2089.

Mackenzie, Colin, Merchant and Shipowner. A harbour at Wick would be useful, but Peterhead is the best place for one, 2113–2116. Would have no difficulty in running into Longhope in bad weather by the chart, 2123.

Shand, Geo., Harbour-master of Lossiemouth. Good anchorage ground in Peterhead Bay, 2133. Great necessity for a harbour of refuge, and no place equal to the south bay at Peterhead, 2139. The best anchorage in the bay is shown on Mr. Stevenson's plan in the direct line with Merchant Street, 2156.

Winchester, John, Shipowner. There is good anchorage in the south bay of Peterhead, 2175–2177. A harbour at Wick would only benefit the trade of Wick, 2180. Peterhead the best place for a harbour of refuge, 2182. Agrees with evidence of Captain Shand and other witnesses, 2183, 2184.

Maclean, James. Concurs with former witnesses, 2192.

Mathieson, James, Master Mariner. Concurs generally with former witnesses, 2204. Has taken shelter at Peterhead nearly 50 times, 2211–2215. Has run for Longhope and Cromarty when he could not take Wick, 2222. Would not like to run for Wick, even were a harbour built there, 2226, 2227.

Brock, George, Shipping Master at Aberdeen. Peterhead is a more eligible place for a national harbour of refuge than Fraserburgh or Wick, 2244. Longhope is easy of access, tide suiting, 2247.

Cargill, John. Retired Shipmaster. Decidedly prefers Peterhead as a harbour of refuge to Fraserburgh or Wick, 2274.

Buick, John, Pilot. Agrees with the evidence of the nautical witnesses, 2282, 2283.

Bain, Thomas, Pilot. Concurs in evidence he has heard, 2300.

Scehwz, Capt., Shipmaster. Shipmasters from Norway always call for orders at Peterhead, 2310.

Gibson, Geo., Joint Collector of Shore Dues. About 150 ships call annually at Peterhead for orders, 2325. About 600 take refuge in the south bay annually, 2333.

Boyd, Andrew, Solicitor. Having charge of the case of Peterhead, is satisfied with the opportunity afforded him of bringing forward evidence, 2343, 2344.

Grant, James, Provost of Elgin. Contemplated improvements at the harbour of Lossiemouth, which would be advantageous to the surrounding district; advantages that would result to the coasting and fishing trades; hopes for a recommendation of a grant, 2348.

Gatherer, Geo., Solicitor, of Elgin. Advantages of proposed breakwater at Lossiemouth; would be of use both as a general harbour and a fishing station; hopes for a loan from Government, 2354–2367.

Petterey, Alexander. *See* Redcar.

Pickernell, Francis. *See* Whitby.

Pockley, John. *See* Bridlington.

Pollett, Robert. *See* Whitby.

Poole, James. *See* Bristol.

Poppelwell, Matthew. *See* North Shields.

Porter, James. *See* Hull.

Portrush (Witnesses examined at):

Patten, Samuel, Harbour-master. A harbour of refuge at Portrush would be of very great advantage. In the event of such being made at the Skerries the western sound should be closed, 4183, 4184.

Campbell, James, Pilot. There is good holding ground at the Skerries, 4217, 4221, 4223. If a harbour be made at Portrush, Broad Sound should be kept open 4219. Loughindall, Lough Foyle, and Ballycastle Bay are all unsuitable for a harbour of refuge, 4224, 4240–4265, 4271.

Hutchings, —, Chief Officer of Coast Guard. There is good holding ground at the Skerries, 4305, 4316–4318. Vessels take advantage of the Skerries as a place of safety, there being no other place available, 4306. The western sound should be closed, 4307.

McAllister, Alexander, Chief Boatman, Coast Guard. A harbour of refuge is necessary at the Skerries, from the number of vessels taking refuge there; there is good holding ground, 4346–4351. The western sound should be closed, 4350. The Skerries afford a favourable, but not a safe shelter, 4356.

Gage, W. C., Esq. The formation of a harbour of refuge at the Skerries would facilitate the passenger trade to America from the north of Ireland, 4398–4402.

Scott, George, Pilot. If a harbour of refuge were made here, the western sound should be closed, 4409. The harbour would be useful for all kinds of vessels, 4416. There is good holding ground, 4424, 4439. Many vessels would take shelter there if the Skerries were made a harbour of refuge, 4437.

Clarke, Alexander, Pilot. The western sound of the Skerries should be closed, 4448. Longhindall, Rathlin, Church Bay, and Lough Foyle are unsuitable for a harbour of refuge, 4451–4467. There should be a harbour at the Skerries, 4455, 4464, 4465.

Thompson, —., Master Mariner. A harbour of refuge at the Skerries would diminish the number of wrecks on the west coast of Scotland, 4477. It would be of service to coasting and foreign shipping, 4478. People take the south channel because there is no place of shelter in the north, 4482. Would prefer the Skerries to Loughindall for shelter, 4489.

Johnston, —., Master Mariner. A harbour of refuge here would be very necessary, 4504. There is no place in the north so well suited as the Skerries for a harbour, 4505, 4513. There is good holding ground

at the Skerries, 4506. Ballycastle Bay and Lough Foyle not suitable for a harbour of refuge, 4507, 4508, 4511, 4518. A harbour at the Skerries would be useful, as a port of call for ships of all classes, 4514, 4515. A light is wanted to guide into the sound at Rathlin, 4534.

Gibbons, Barry Duncan, Engineer, Board of Works, Dublin. Proposes to construct a wall like that at Holyhead, 18 or 21 feet above high water, 4550, 4551. The two piers would convert this into an excellent roadstead, 4552. It would decidedly be better to close up the western sound, 4555. There is sufficient supply of stone in the quarries, 4558. There is no lime in the vicinity, 4561. There would be no difficulty in getting stones from the quarries, 4576. Ineligibility of Loughindall as a place of refuge; eligibility of Portrush, 4609. A harbour of refuge should have at least a 500 feet opening, 4606. Referring to the plan of proposed breakwater in Wick Bay, thinks there would be a very heavy roll of sea into its mouth, endangering the safety of vessels against the pier heads, 4578. An opening of 500 feet width would be sufficient for coasters, but not for foreign vessels, 4607.

Dargan, William, Esq. There are greater capabilities for a harbour of refuge here than elsewhere on the coast, 4612. Would have no hesitation in carrying out the work, 4615.

Bedford, Capt. *G. A.*, Admiralty Surveyor. Agrees with previous witnesses as to the difficulty of entering Lough Foyle. Portrush offers considerable refuge, if better known and lighted. Objects to closing the western sound. Would prefer keeping both sounds open. If the west sound were closed, the bight produced would in course of time be silted up, and the sea setting in to the broad sound would render the port unsafe for easy anchorage. The great desideratum is a light on the Skerries rocks, 4619, 4620. A commercial harbour at Portrush would be of great benefit, but it is not essential. It would do well enough for a harbour of refuge if lighted, 4621. Government would not be warranted in laying out money to make the proposed harbour at the Skerries, 4622. More lights are wanted on the Irish coast, 4623–4629.

Fraser, Capt., Admiralty Surveyor. Concurs generally in the evidence of Capt. Bedford, 4632. The broad sound should be closed entirely; it would then afford shelter to a large amount of shipping. There is deep water and good holding ground, sufficiently good for any purpose. A harbour at the Skerries could never be turned into commercial purposes. Lough Foyle could not be made available for a harbour of refuge, 4632. A harbour of refuge should be constructed here, keeping the western sound open, 4636, 4637.

Hoskyns, Lieut., Admiralty Surveyor. It is fair enough holding ground at the Skerries, 4651, 4652. Lough Foyle could scarcely be considered a harbour of refuge, 4655. Would leave the western sound open, 4656. Once inside the heads, Lough Foyle is a safe harbour, 4659.

Magowan, —, Master Mariner. A harbour of refuge at Portrush would be of decided advantage to every vessel going north-about, 4664.

POTTS, WILLIAM. *See* REDCAR.
POUNDER, THOMAS. *See* REDCAR.
POWELL, WILLIAM LLEWELLYN. *See* SWANSEA.
PRICE, W. *See* WATERFORD.
PRICKETT, THOMAS. *See* BRIDLINGTON.

QUALTROUGH, THOMAS. *See* DOUGLAS.
QUICK, JAMES S. *See* ST. IVES.
QUIRK, RICHARD. *See* DOUGLAS.
QUYLE, EDWARD. *See* DOUGLAS.

RAMSAY, JOHN. *See* DOUGLAS.
REDCAR (Witnesses examined at):

Mackenzie, Thomas, Shipmaster. The best place between the Pentland Firth and the Firth of Forth for a harbour of refuge would be Peterhead, 18,193. Wick would not be large enough, 18,194–96. Difficulties of the Pentland Firth, 18,207–20. The first improvement should be the construction of a harbour at Redcar, 18,221. If the Tyne, the Tees, and the Wear could be made to have 16 feet depth at low water, it would be preferable to one great harbour, 18,228. The lower down in the bight the harbour is the better, 18,231, 32. Decidedly prefers Redcar to Hartlepool for a harbour of refuge, 18,242–44. A harbour of refuge ought to be such as can be taken at all times; Hartlepool cannot, 18,244–46. A harbour could be made at Redcar of equal extent to one at Hartlepool. The situation is better, 18,256–58. There is no place equal to Redcar between Flamborough Head and the Tyne 18,259. Filey would make a fine harbour, but it is too far south, 18,261. Bridlington is too near the Humber, 18,262. Prefers Hartlepool to Sunderland, 18,263, 64. If the bar at the Tyne were removed, so as to get 16 feet at low water, it would be sufficient for the coal trade, 18,267. Supposing only one harbour, prefers Hartlepool to Filey, and Redcar to Hartlepool, 18,304–08. Redcar is already a harbour of refuge by daylight, 18,338. Filey would be convenient for vessels that anchor on the coast from Flamborough Head, 18,349. If only one great harbour it should be somewhere in Tees Bay, 18,350. In the gale of 4th Jan. 1857, many vessels would have been saved by harbours at Hartlepool and Filey, 18,379. Filey Bay would be valuable to deep-laden vessels, and a harbour in the depth of the bay to light vessels 18,381, 82. Although preferring Tees bay, a harbour at Filey also would greatly benefit the coasting trade, 18,386–96. Prefers Peterhead to Wick, 18,401–05. For the coast between Blyth and Whitby would prefer a harbour of refuge at Redcar, 18,406–10. There is a harbour already at Hartlepool, and none at Redcar, 18,412.

Trotter, Charles, Chairman of Tees Causeway Commissioners. Statement in favour of improving existing harbours, which could be effected at little expense, 18,429.

Fowler, John, Resident Engineer of the Tees Conservancy Commissioners. Statement in favour of, and plan proposed for, the construction of a harbour of refuge at the mouth of the Tees; capabilities of the site, and materials for construction, 18,434. Plan for one of his schemes the same as that of Mr. Abernethy at Blyth 18,437–42. The freshes do not run out very strong into the sea here; amount of water power, 18,448–51. A heavy sea will set in the proposed harbour, but the anchorage will be above it, 18,456. Thinks there will be a bar at the mouth, 18,457–59. Moveable sands from Tees mouth to Hartlepool, 18,462–67. His scheme is to make a harbour available for shipping 18,468–70. His larger scheme requires five fathoms water, which will prevent inconvenience from sand coming in, 18,471–73. Greater depth might be necessary in cases where there is less scouring power than here, 18,474, 75. The soundings are deepening, but not so as to cause alarm while the bay is kept in its present condition, 18,476–79. The sand to the south of Redcar has diminished; some may have come into the Tees, but will not reach the south pier head, 18,480–83. With the improvements, vessels may come up as far as Middlesborough, where the least depth will be seven feet at low water, which smaller vessels might reach; the larger ones might reach the eighth buoy, 18,485–95. Expects 150 acres, at all times of the tide, for vessels 18 feet water up to head of fifth buoy pool, 18,496–500. Entrance to his harbour will be close to the north pier, where the channel will be scoured to 700 yards width, 18,507. The South Gare will be washed away, and lodged within the south pier, forming a low-water sand edge, 18,509, 10. The South Gare has 21 feet of sand, and has a tendency to move; it changes rapidly and frequently, 18,511, 14. There is 1,800 feet between the North and South Gare, 18,519. Width between his pier heads will be 700 yards: the estuary of the Tees will be enlarged to that extent, 18,519–22. Has heard that Mr. Abernethy's plan failed at Nairn, but has seen no indication of its failure at Blyth, 18,526. The piers might be constructed in the usual way for 400,000*l.*, 18,527. Would spend that amount of public money in enclosing the sands and making a site for a harbour of refuge, 18,529. Moorings could be laid down in the present anchorage at very little cost, and there would be anchorage for 2,000 vessels, 18,530–32. By sluicing the channel he expects 18 feet water at the fifth buoy, and more in other places, 18,533–36. Has no doubt of being able to drive away the sand at the North Gare by scouring, so as to get 18 feet at low water where it is now dry at 6 feet, 18,539, 40. Has seen the channel of the Tees vary eight points of the compass, 18,544–47. The direction does not affect the depth at the bar; it depends on the height of the Gare, 18,551. Proposed entrance east by north, which direction will answer all the dangerous winds on the coast, 18,552–55. East by north the prevailing wind between Flamborough Head and the Staples, 18,556. Soundings, borings, and nature of the ground, 18,557–67. No benefit in a pier running southerly from Snook Point, 18,568. There is six inches difference in level from the

bar to the Bransand, 18,570. The tide flows up 27 miles; there are 16 feet on the rise, being 3 inches a mile the whole way, 18,571–73. There is a greater depth over the bar of the Tees than any river between Flamborough Head and the Fern Islands, 18,578. Approach to the Tees is well buoyed and lighted, 18,580, 84. Depth of water on the South Gare at low water, 18,592. Shifting nature of the mouth, 18,592–94. Variations in the soundings of the bay south of Long Scar Head, 18,595–609. Shifting of the river channel, 18,613–26. Means proposed of guiding the stream and scouring the mouth, 18,627–34. The outflow of the tide will be diverted from Hartlepool roadstead by the construction of the pier, 18,635, 36. The driven sand would form again between the Tees mouth and the roadstead of Hartlepool, but would ultimately lodge behind the north pier, 18,638–40. Is quite convinced the works will be effectual in guiding the channel and fixing the sand, 18,641, 42. There is an immense scouring power now in the Tees; knows nothing that will lessen it, 18,653. His proposed piers will widen the passage considerably, will guide the channel permanently, and equalize the stream, 18,659–61. Rates of velocity in the stream of the Tees, 18,663–69. The best of stone may be had from Marske, 18,670–78. Nature of the material on the wall on the Seal and Bran Sands, 18,680–83. The works proposed, on Mr. Abernethy's system, would last for 25 years without needing heavy repairs, 18,684–95. Explanations as to the weight and cost of slag, 18,700–12. Proposes to have moorings for the use of vessels taking shelter, 18,724–27. Does not apprehend that vessels will object to anchor at the moorings on dark nights, to the obstruction of others, 18,728–31. Small vessels usually go up the river to make room for the larger, 18,734. Periodical shifting of the channel, 18,745–54.

Fraser, John, Civil Engineer. Agrees in opinion generally with Mr. J. Fowler, 18,671. Submits a plan, 18,763. His project is simply for a harbour of refuge at Redcar; a breakwater 4,100 yards long, to be placed in 7½ fathoms water, 18,772–74. Construction and cost of the north breakwater, 18,780–99. Another proposed construction is a pier to break the force of a south-east gale, and to break rough seas from the harbour entrance, 18,800–05. His project and Mr. Fowler's will mutually effect improvements, 18,809. His proposal of one large harbour at Redcar will afford more shelter than Mr. Fowler's at the Tees, and is more likely to be permanent, 18,811–21. The total cost of his plan for Redcar will be 1,105,000*l.*, 18,828–33. Amount of enclosed area by proposed breakwater, 18,839–48. The three-fathoms line between the Long Scar and the Heugh has advanced seaward since 1853, 18,852–63. The silting in the estuary comes from the sands at the Tees mouth, and what is brought out by the river, 18,865. The shore current will prevent the deposit of sand behind his breakwater, 18,869. His jetty will not interfere with the current, 18,870. Action of the tide in Tees Bay, 18,874–80. Has no fear of his harbour silting up, 18,881–84. The position of his breakwater will enclose the largest area, and give the greatest depth of water, at the least expense, for the purpose of refuge, 18,895, 96. Does not look to trade, but to the saving of life and property, 18,897. His harbour of refuge on the south side of the bay will render one on the north unnecessary, 18,899. Vessels should be protected in Hartlepool Bay, but they would get to sea easier from Redcar, 18,902. A harbour of refuge at a trading port might be filled with trading vessels, to the exclusion of those requiring shelter, 18,907. Details of material, construction, and cost of proposed breakwaters, 18,909–94. In seven years enough of the work would be made to afford great protection, 18,995–19,002, 19,023. Explanation of previous statements, 19,182.

Anderson, John, Engineer and Contractor. Proposal to extend the mouth of the Tees 2,000 yards, at a cost of 76,700*l.*, 19,033. Character of proposed work, and estimates of cost, 19,044–111. Will forward plans and estimates to London, 19,172–81. Great quantities of stone at Cleveland, Eston, and Upleatham Hills; there is no stone fit for a breakwater nearer than 20 miles from Hartlepool, 19,985–20,013.

Lister, —, Pilot. A breakwater at the Tees, running westerly, and enclosing an area for 150 sail, is sufficient for every exigency; it would not interfere with the roadstead; would protect from a north-east sea; give a better lead out, deepen the channel and bar, 19,120, 21. A pier or breakwater might be made from Hartlepool Heugh to the Seaton buoy to keep out the sand, 19,127, 28. There is a great deposit from the Tees; some goes to Hartlepool, and has to be dredged out, 19,133, 34. Opinion of the Hartlepool pilots as to silting up in the bay, 19,139–44.

Dodds, —. Explanation as to the different plans for the improvement of the Tees; chiefly as regards that advocated by the Tees Conservancy Commissioners, *pages* 576, 577.

Dunning, John, Engineer and Surveyor. Submits a plan for a harbour of refuge, 19,154–59.

Brooks, William Alexander, Engineer to the Tyne Improvement Commissioners. Gives in plans for the Marske breakwater and the Redcar pier, 19,160–71. Doubts if the entrance to the Wear can be improved; the Tyne might be, 19,192. Has no certainty that if piers were carried out to a depth of 30 feet, that depth would be maintained, 19,193. If piers are carried out to meet a tide of four or five knots an hour, a bar might be removed, 19,195. Sixteen feet water, and 16 feet flow of tide, would make the Tyne a good harbour of refuge, 19,196. Low rate of speed of tides in the Tyne, 19,200–07. Tides would not be much obstruction to ships entering in east gale, 19,208–10. The experiment has never yet been fairly tried in England, with ample means, of making a harbour of a tidal river; the Tyne is the best river for such an attempt, 19,211–22. Wear might be improved, but would never make a harbour of refuge, 19,223, 24. The channel in the mouth of the Tees has shifted; the position of lights has been altered, 19,228–38. Mr. Fowler's plan would improve the channel of the Tees, and deepen it, but not make it more permanent, 19,245–60. Submits a plan for a harbour of refuge at Redcar; two proposed works:—a pier on Salt Scar Rocks, and a breakwater abreast of shore between Marske and Saltburn; all good holding ground; no danger of silt; abundance of stone near, 20,322. Cost of the works, 20,324–27. The obstructions in the entrance could be removed, 20,329–33. As a complete project, it might be completed in 20 years, 20,353–58. It will shelter 300 vessels, with plenty of room, 20,361. In forming his project has taken the maximum, but will furnish a reduced estimate, 20,401–04.

Fallowes, William, Shipowner and Tees Conservancy Commissioner. Produces returns of numbers of ships registered at different ports, whither bound, and of wrecks; a register of winds, &c.; losses at Hartlepool would have been avoided by a harbour at the Tees, 19,261–65. Better improve the existing harbours than construct a new one, 19,272–74. The 76,000*l.* plan would give 16 feet at low water at the end of the pier, and would answer all the purposes of district, 19,275–80. If one great harbour be constructed, it should be at Tees Bay; prefers Hartlepool, 19,281–88. Revenue of Tees Commissioners and amount expended in improvements, 19,291–300. If the works here and at the Tyne succeed, there still should be a harbour near Flamborough Head, 19,301–08. Two harbours of five fathoms preferable to one of seven, 19,315.

Coulson, Robert, Receiver of Wrecks, &c. Puts in returns of wrecks and stranded vessels, with explanations, 19,317–50. Statement of various wrecks at different times in the district of Tees Bay, 19,351–73. A harbour would have saved the greater portion, 19,374.

Brown, Thomas, Ship Owner and Master. The improvement of the Tyne, the Wear, and the Tees would save more life and property than one large harbour, 19393–401. With the smaller proposed improvement 60 vessels could safely anchor, 19,402–11. Strength of the tides in the Tees mouth, 19,422, 23. If there be but one harbour between Flamborough Head and the Fern Islands, it should be on the west side of Tees Bay, 19,424–28. A breakwater between the Heugh and the Long Scar only would be too small, 19,433. Filey too far south for a harbour; Runswick a better place; thinks there are 400 acres at three fathoms and upwards; anchorage for 200 ships would be sufficient, 19,436–53. A harbour is required on east coast of Scotland chiefly for the fishery; Wick the best place, 19,457–66. Would have no hesitation in running through Pentland Firth in a gale, 19,454–73. Reasons for preferring Runswick to Filey, 19,474–83. A depth of 16 feet at low water here would be sufficient, 19,484–94. If this port were improved to 16 feet and the Tyne to 15 feet, colliers could run in at any time; strength of freshets in the Tyne, 19,495–504. If Tyne and Tees improved there should be a harbour at Runswick Bay for ships bound south, 19,505, 06. A harbour for trade and refuge preferable to one for refuge only, if vessels seeking refuge were not obstructed, 19,510–16. Wick affords no shelter; should be made to do so, 19,517–22. Shelter

necessary between Blyth and Whitby; there is none at present; Tees Bay the place for it, 19,523–30. Two hundred the smallest number of vessels a harbour should be able to accommodate, 19,531–38. Statement and opinion as to the navigation of the Pentland Firth, 19,539–83. Doubts the advantage of a harbour at Wick, 19,585–94.

Hestead, Henry, Shipmaster. The improvement of the Tees would save much that is frequently lost; the Tees the best place for a harbour of refuge, 19,595–606.

Pounder, Thomas, Keeper of the High Light at Seaton. Every harbour should be improved; the Tees is preferable to Hartlepool; a breakwater on the North Gare would make a deep channel, 19,607–13.

Chilton, Robert, Keeper of the Tees Floating Light. Keeps a register of winds; their effect on soundings, 19,619–29. Shifting of sand in the channel, 19,635–45. Direction of the tide out of the Tees Bay; freshets bring down mud, not sea sand, 19,647–60. Statement of most destructive gales in Tees Bay, 19,671.

Burdon, John Rig, Shipmaster. Necessity for a general harbour, by forming a breakwater across Tees Bay; in default of this, one where there is no trade,—at Redcar, 19,676–81. A harbour further south would be of some use,—either at Runswick or Filey; the latter preferable, 19,682–99.

Hudson, John, Shipmaster. One great harbour would be better than improving the Tees, the Tyne, and the Wear; the bight of Tees Bay is the best spot, 19,700–14. Further south would prefer Filey to Runswick, 19,716–20. Prefers Hartlepool to Filey, and Redcar to Hartlepool; good holding ground at Redcar, and no fear of silt, 19,721–28.

Petterey, Alexander, Master of the Tees Conservance Dredger. Nature of soil taken up by the dredger at West Hartlepool, 19,748, 19,781–86. A dredger must by constantly employed on the bar to keep good water on it, 19,763–66. Sluicing at Old Hartlepool brings a great deal to West Hartlepool, 19,772. Cragpool Scarp is lowered three feet; the water will remain, 19,774–80. Nature of the soil dredged up in West Hartlepool channel, 19,787–92. At West Hartlepool, at the dock sill, in a few days during fine weather, the part dredged would fill up again, 19,819–50. The material taken out was silt of a dark colour; much might be coal dust, 19,865–69.

Ditchburn, Andrew, Pilot. There is good anchorage at Old Hartlepool, 19,897–900. Good anchorage in mouth of the Tees; prefers Redcar to Hartlepool for forming a harbour, 19,902–18.

Stoker, Robert, Shipmaster. Improvement of the three tidal harbours preferable to one large harbour; but if one, Redcar is the best spot, 19,925–32. Another further south very desirable; Filey Bay the best site; but if only one, Redcar first, then Hartlepool, then Filey, 19,933–38. A harbour of five fathoms would be sufficient for the passing trade, 19,946. If only one large harbour be made it should accommodate 1,000 sail, 19,963. Better employ the money in two harbours than one, 19,967. Many wrecks are caused by mismanagement, 19,968. A light on Redcar Rocks is necessary, 19,972. A beacon at the end of the Salt Scar would be very useful, 19,983.

Oxley, C. C. Great desirability of a harbour of refuge at Redcar; return of wrecks and stranded vessels between Staithes and Tees Bay, *pages* 601, 602.

Pace, Lieut., commanding Coast Guard. Prefers Mr. Brooks's amended plan for a harbour at Redcar, it being the best spot in the vicinity for refuge, 20,017. A harbour at Hartlepool would be best for trade, but Redcar for saving of life and property, 20,035. Great necessity for a light or a buoy on the Salt Scars, 20,036–41.

Colson, John, Shipowner and Lloyd's Agent. List of wrecks and lives lost, 20,044. Harbour most needed at Redcar, where it could be made for half what it would cost elsewhere, 20,045–66. There would be no tendency to silt up; sand moves away to the Tees, and does not return, 20,067–82. Has heard that Hartlepool has silted up three feet in 20 years, 20,089–92. More light than loaded vessels lost in this district; more lives lost from laden than light vessels generally, 20,093–101.

Dodson, Robert, Seaman. A harbour of refuge much needed here, would be more useful than to improve the Tyne, Tees, and Wear; has been in great risk for want of it; the Tees could never be made a complete harbour of refuge; it might be somewhat improved, 20,102–36. Vessels are wrecked through hugging the coast, 20,139. Pier or light needed on the rocks, 23,140–43. There is no shifting of sand under water, but sand is blown off the banks into the water; it is carried from the Tees towards Hartlepool, 20,143–45. Sand and broken water in the Tees prevent much improvement, 20,158. The Brand Sand is stationary; the North and South Gares are quicksands, 20,165–71.

Gerr, Joseph Webb, Shipmaster. One large harbour is preferable to improving the Tyne, the Tees, and the Wear; Redcar is the best site, 20,179–84, 20,192. Accommodation for half the numbers that accumulate in Yarmouth Roads would be ample, 20,190. Filey is too far south for general purposes; of no use to light vessels, 20,191. Hartlepool is the next best place to Redcar; the attempts to make tidal harbours, harbours of refuge will be unsuccessful, 20,211. The improvement of the Tyne would be serviceable, but not as a harbour of refuge; light vessels might run in; strangers would not attempt it, 20,212–20. Accommodation at Redcar for from 200 to 300 sail would suffice, 20,223. If 30 feet at low water could be got at the Tyne, would still object to it for laden vessels, 20,224–31. Reasons for preferring Redcar to Hartlepool, 20,246, 47. A harbour at Redcar for light vessels, and one at Filey for laden, would be all the trade of the coast would require, 20,255.

Thompson, Thomas, Fisherman. A harbour of refuge at Redcar would do most to save life and property; plenty of water; good anchorage; lies well out to sea; broken water at Hartlepool makes that port dangerous, 20,256–81.

Brown, Addison, Master Mariner. A harbour needed at Redcar; it would take all vessels coming down from Flamborough; would be equally useful for light and laden vessels, 20,287–90. Vessels lost in the gale of January 1857 would not have been saved by a harbour at Filey any more than by one at Redcar, 20,298. Redcar is better than Hartlepool, and one large harbour at Redcar is preferable to improving those existing, 20,302–11.

Potts, William, Fisherman. Advocates a harbour of refuge at Redcar, 20,312–18.

Reed, Robert, Shipmaster. States instances proving the necessity for a harbour of refuge, 20,411–15. Redcar is preferable to Hartlepool for the harbour, 20,423. The broken water extends three miles out of Hartlepool Heugh, 20,421–37.

Redmond, John Edward. *See* Wexford.
Reed, Robert. *See* Redcar.
Reid, John. *See* Fraserburgh.
Richardson, George. *See* Whitby.
Richardson, James. *See* Swansea.
Richardson, Thomas. *See* Whitby.
Riddell, James. *See* Sunderland.
Ritchie, David. *See* Dundee.
Roach, Edmund. *See* Wexford.
Roach, George. *See* Liverpool.
Robertson, Capt. *See* London.
Robinson, Henry. *See* Whitby.
Robinson, J. T. *See* Sunderland.
Robson, Thomas. *See* Sunderland.
Rosser, John. *See* Swansea.
Ruddock, John. *See* Whitby.
Russell, Robert. *See* Hartlepool.

Sainsbury, John. *See* Douglas.
Sawdon, Benjamin. *See* Bridlington.
Sawyer, J. *See* Bristol.
Scales, Robert. *See* Bridlington.
Scehwz, —. *See* Peterhead.
Scott, George. *See* Portrush.
Scott, Joseph. *See* Peterhead.
Scott, Michael. *See* London.
Shand, Geo. *See* Peterhead.
Sharp, Charles. *See* St. Ives.
Shaw, Maltman. *See* Hartlepool.
Shepherd, James. *See* Sunderland.
Sherringham, William Lewis. *See* Padstow.
Shield, George. *See* Dundee.
Shotten, G *See* North Shields.
Simpson, Benjamin. *See* Filey.
Simpson, Joseph Hood. *See* Swansea.
Simpson, William. *See* Sunderland.
Sinclair, J. G. T. *See* Wick.
Skerry, James. *See* Whitby.
Sleigh, Adderley. *See* London.
Smales, Gideon. *See* Whitby.
Smith, George. *See* Glasgow.
Smith, James. *See* Sunderland.
Smith, Thomas. *See* Hartlepool.
Smith, William Broderick. *See* Whitby.
Somers, Andrew. *See* Aberdeen.

Souter, Alexander. *See* **Peterhead.**

Sparke, George. *See* **Sunderland.**

St. Ives (Witnesses examined at):

Tremearne, John N., Agent to Lloyd's, Consul, &c. Vessels lost and numbers delayed for want of a harbour of refuge here, which, if made, would be largely used good sandy bottom, 8776–8790.

Quick, James S., Harbour-master. St. Ives the best place for a harbour of refuge for vessels going down the Bristol Channel, but present harbour useless in certain winds; excellent anchorage, 8800–8810. Danger at Padstow and Lundy Island. Penarth roads good for large vessels, 8821. A breakwater should be made from the Head a quarter a mile or half a mile in length; tides, 8811–1815. A harbour is required on the other side of the Channel, notwithstanding the advantages of Milford Haven, 8823–8830. The north country clubs will not allow their vessels to come in to the pier, consequently many have been lost, 8832–8835. If money is laid out in a harbour of refuge at Lundy Island it would not be lost, 8841. A harbour at St. Ives would be available for all vessels coming down the English Channel and going up the Irish Channel, 8857–8860. Good holding ground, 8869, 8870. Quicksands at Dunbar, 8877. St. Ives is the best spot on the south coast for a harbour, 8868–8883. Difficulty of making Milford Haven, 8885. Anchors seldom drag in St. Ives Bay, 8886–8888. A fog-bell would make light vessels more useful, 8897. Depth at Hayle Bar and St. Ives Bay, 8901–8904. Best anchorage in the bay, 8905, 8906. The light on Godrevy Head is misplaced, 8907–8919. The present light is best for the coasting trade, 8927.

Jennings, William, Fisherman and Pilot. Necessity for a harbour of refuge; better here than at Padstow or Clovelly, 8944–8958. Good anchorage at St. Ives, 8960. There is no silting here; the depth has been the same for many years, 8963, 8964. The anchorage is bad at Church Bay, 8975. Harbours at Clovelly and the Mumbles are not necessary, 8980. Wrecks at Lundy in westerly gales, which a harbour here would have prevented, 8989–8995. Such a harbour would be invaluable to vessels going up Irish Channel, 8944, 8999. Present position of Godrevy Light the best, 9000–9003. Difficulty of making a harbour of refuge at Padstow, 9009–9029. A bell on the Stones beacon very desirable, 9043–9056. A lighthouse on the Stones preferable to a lighthouse on Godrevy Island, 9059. St. Ives is the best place between Hartland Point and Cape Cornwall or Godrevy Head for a harbour, only a breakwater necessary to complete it; dangerous winds; good anchorage; 9071–9083. There is not sufficient water for a harbour of refuge in Clovelly Bay; vessels unable to get to Lundy have to put back; can get better shelter here than anywhere else, 9084–9111. Natural harbours on coast of Wales sufficient, 9112–9116. Depths at Penarth Road and Clovelly; vessels will not anchor at Lundy; Penarth is a good roadstead, 9123. Anchorage at the Mumbles much used, because of good outlet, but no protection, 9142–9150. Would not make a harbour at the Mumbles; a breakwater desirable, but must be of great length, and would be very costly, 9153–9162.

Paynter, Nathaniel, Fisherman and Pilot. Would like to see a harbour of refuge at St. Ives, and another at Padstow; but if there be only one it should be at St. Ives, 9169–9181. Does not know how the entrance to Padstow Harbour, and the indifferent anchorage, could be improved, 9193–9199. Padstow the best site for a harbour between St. Ives and Bristol, if it could be made; Doom Bar is hard sand, would be difficult to remove, 9200–9210. The roadstead at Penarth is good; the Mumbles is useful to coasters, 9214, 9215. There is a heavy sea outside Padstow Harbour, 9218. St. Ives decidedly preferable to Padstow, 9238.

Andrews, Richard, 35 years at sea. Necessity for a harbour of refuge at St. Ives, as, in certain winds, vessels cannot venture in; at present, vessels are afraid to run for Milford Haven in thick weather; it is a good harbour, but a bad place to run for, 9251, 9252. Lundy is a bad place to anchor at, 9253. Mumbles affords shelter for small vessels, large vessels in Penarth Road, 9255–9259. Douglas preferable to Ramsay (Isle of Man) for a harbour, 9270. Tide only 2½ knots round St. Ives Head, 9276. Danger of Padstow Harbour from want of water; reason of vessels keeping the coast; breakwater at St. Ives would save hundreds of lives, 9278–9298. Vessels are generally safe above Lundy, 9302. Mumbles the best outlet in the Bristol Channel, 9308. Lundy is not considered a good place to anchor in, 9325. Safe from all winds at the Mumbles, 9327. Clovelly a better site for a harbour than Lundy, but not good, 9337. Most of the harbours on this coast are dry at low water, 9350. A breakwater at the Mumbles would not render it fit for large vessels, the anchorage is not good, 9353–9359. St. Ives and the Mumbles are the best places for harbours of refuge; Mumbles preferable to Clovelly for the north side, 9370–9376. It is bad anchorage at Lundy, not desirable to make a breakwater, &c., at Lundy, 9379–9387. If a breakwater be made at St. Ives, it must not go inside the old one, 9396.

Stevens, Richard, Master Mariner. There is necessity for a harbour of refuge at St. Ives; course of vessels navigating Bristol Channel, 9404–9409.

Veale, William, Master Mariner. St. Ives is the best place for a harbour of refuge; Mumbles a good shelter for small vessels, 9420–9423. There is good anchorage in Penarth Roads; objections to Lundy Island, 9424–9428. Numbers of vessels take refuge at the Mumbles, but they always ground, 9430, 9444, 9450. A breakwater extended a mile from the Mumbles Head would enable vessels to make Swansea Bay; St. Ives and the Mumbles best places in Bristol Channel for harbours of refuge, 9451–9456.

Daniel, Thomas, Shipmaster. Milford Haven difficult to make, 9468–9470. Vessels ground at the Mumbles; anchorage at Penarth Roads similar to that at the Mumbles; it is safe for small vessels, 9471–9478. Lundy Island not a good anchorage; Burnham a good harbour; King's Road safe at all times, 9478–9490. Bristol Channel fairly lighted and buoyed; St. Ives best place for harbour on the south shore; Mumbles on the north shore, 9491–9503.

Sharp, Charles, Shipmaster. The Mumbles might be made a very good place; safety of Penarth Roads, 9521–9525. The anchorage at Lundy is bad, 9527. Strong tides off Lundy Island, causing a very heavy sea, 9530–9538. Clovelly or Lundy Island best place for a harbour on south shore between King's Road and St. Ives, 9550–9558. St. Ives from Land's End to King's Road, 9549–9559. Mumbles the best place on the north shore, 9559.

Stearn, Charles. *See* **Douglas.**

Steel, Thomas. *See* **Cardiff.**

Stephen, Alexander. *See* **Fraserburgh.**

Stephen, John. *See* **Fraserburgh.**

Stephen, William. *See* **Fraserburgh.**

Stephens, Abraham. *See* **Waterford.**

Steven, William. *See* **Wick.**

Stevens, Richard. *See* **St. Ives.**

Stevenson, David. *See* **Peterhead. Sunderland.**

Stewart, Abraham Harvey. *See* **Londonderry.**

Stewart, William. *See* **Stonehaven.**

Stockton, Isaac. *See* **Hartlepool.**

Stoker, Robert. *See* **Redcar.**

Stonehaven (Witnesses examined at Aberdeen):

Tindall, James, Clerk to Harbour Trustees of Stonehaven. Stonehaven a fit place for a subordinary harbour of refuge. History and particulars of trade of harbour; report upon it by Mr. R. Stevenson; its advantageous position; a tidal harbour; could be made to admit vessels at low water, 2734, 2735, 2742. Is a sort of harbour of refuge at present; might be made to shelter 50 or 100 vessels at all times of the tide, 2737–2741. Expense according to Mr. Stevenson's estimates, 2739.

Stewart, Wm., Sheriff Clerk of co. Kincardine, &c. Agrees with Mr. Tindall's evidence, 2753. Stonehaven is well situated for a harbour of refuge, 2755.

Kinnear, Arthur, Solicitor. Agrees with Messrs. Stewart and Tindall, 2758. Stonehaven Harbour the most easily taken during storms on east coast, 2759. It would be better to improve present harbours than construct a new one, 2760. A large harbour would be useful, but not necessary, 2761.

Storm, Sampson. *See* **Whitby.**

Straker, Joseph. *See* **North Shields.**

Stribley, John. *See* **Swansea.**

Strickland, Arthur. *See* **Bridlington.**

Stuart, Alexander. *See* **Peterhead.**

Sunderland (Witnesses examined at):

Robinson, J. S., Clerk of Commissioners of the River Wear, presents a memorial from the Commissioners, showing the necessity for protection on north-east coast; that one general harbour of refuge would not be sufficient; and that the best mode of providing shelter is by improving the most important harbours on the coast, *page* 423.

Meik, Thomas, Engineer to Commissioners of the River Wear. As many as 200 ships sometimes enter Sunderland harbour at one time; particulars of various vessels lost, which might have been saved had there been sufficient depth of water for them to enter the harbour; the loss of life not very great near Sunderland; rocket apparatus has saved 135 lives in six or seven years; the harbour too small; a very heavy sea runs up the harbour, led in to a great measure by the two piers; the heavy sea and strong tide cause large deposits of sand on the bar, varying in depth from five to two feet; the loss of one or two feet depth at the bar is of serious consequence; much dredging has been done upon the bar; vessels can only enter the harbour during four or five hours at the top of the tide; lying off the harbour mouth, and caught in a storm, they are lost; the best remedy for these evils would be the improvement of the various harbours along the coast; difficulty of constructing a breakwater, 14,917. By the proposed improvements there will be 17 feet depth at low water spring tides, 14,923. The proposed piers will prevent the flow of sand filling up the channel, 14,942. Sunderland gets nothing in return for the dues it pays to Newcastle, 14,950. Width of proposed entrance will be 800 feet, 14,960. Returns of wrecks ought to be published, 14,976–83. The first consideration should be for light vessels on this coast, 14,997–15,006. The improvement of the existing harbours would be the best way of spending the money, 18,008, 09. And a harbour should be constructed near Flamborough Head, more especially for laden vessels, 15,011. The return does not include arrivals and sailings from Sunderland for 1857, 15,096. Agrees with Mr. Stevenson as to the effect of proposed works, 15,915. Great changes occur in the bar by the dredger, but the tendency to change is the same now as it was in 1853, 15,924–28. A channel 10 feet deep might be maintained with no difficulty and at little expense, 15,935, 39. Ballast is prohibited from being thrown into the sea within ten fathoms at low water, but it is done, and within the harbour; it cannot be prevented; there are no means of detecting the offenders, 15,940–57. All appliances for repairing laden vessels are to be found at Sunderland, 15,978.

Stevenson, David, Engineer. Present objections to Sunderland Harbour are, the small depth of water on the bar, the large amount of sea at entrance, and the range in the lower part of the harbour; the bar consists of sand; it varies in depth and position, and is caused entirely by the heaping-up action of the sea in easterly gales; the depth of the channel is maintained by the tidal action; two methods may be taken to improve the bar, one to increase the back-water, the other the protection of the harbour's mouth from the action of the waves; proposed plan is not intended for a harbour of refuge, but to improve present harbour; the effect of the piers will be to lower the bar, to lessen the sea at the mouth, and to abolish the range in the lower reach of the harbour, 15,018. Had these piers been put up, many wrecks would have been prevented, 15,021. The estimate for carrying out the proposed works is 300,000*l.*, 15,757. To be entirely of stone; pier heads to be brought up with the diving bell, the rest rubble, and the superstructure rough blocks of stone; the entrance will not be affected by sand carried by the sea, 15,758. Area of refuge to be gained by proposed piers, 15,760. With 18 feet at low water of spring tides at the pier heads, 15,766. The bar shifts from the pier head to about 400 or 500 feet in front seaward, 15,779, 80. As much back-water as possible should be obtained to assist outward scour, 15,783, 84. Depth of water between existing piers will be increased about four or five feet, which, with proportionate decrease of sand, will be a valuable improvement, 15,768–89. For vessels entering the effect will be about 9½ feet of extra depth, 15,790. Smaller piers than those proposed would not answer equally well; formula by which reduction of the sand is calculated, 15,792–94. There is no action of the sea in about 18 feet depth to raise sand and drive it into the harbour, 15,795–800. A refuge harbour at Redcar would not silt up from the stroke of the wave, 15,802. The slope of the bed of the Wear is about two feet per mile, which might safely be decreased to the amount of seven or eight inches per mile, to the benefit of the harbour, 15,804–8. Sunderland Bar is not formed by matter brought down by the river, but by the action of the sea, 19,812. There has been much dredging in the Wear; none would be required on the bar if the proposed piers were erected; if the refuse thrown into the river otherwise disposed of, 15,813–15. Depth of water at inner end of present piers is five or six feet; the foundation of the piers would bear dredging to twice that depth, 15,816, 17. If proposed piers were erected, there would be no difficulty in maintaining a channel of ten feet from the Potato Garth out to sea, and Sunderland Harbour would become to that extent a complete harbour of refuge, 15,818–20. The north pier was lengthened about 15 years ago; the sand which comes out to the pier head has grown to the length of the new part, 15,824, 25. The bar consists of a fixed quantity of sand travelling to and fro, 15,830. The depth of the channel could not be increased by dredging, as the next heavy sea would fill in all that had been dredged out, 15,834. No silt or sand will be driven by the sea into the mouth of proposed harbours, nor will anything brought down by the river be deposited in the channel, 15,848–64. The bottom of the bar is rock, overlaid with eight or nine feet of sand and gravel, 15,873. Matter brought down and deposited by the river ceases about the South Beaching Basin, where it meets the material brought in by the sea, 15,884. The banks of the Potato Garth and the Wave Basin have sand upon them thrown up from the sea, but neither vary in size, 15,886–89. The present entrance to Sunderland Harbour of 370 feet would be sufficiently wide if the piers diverged from the entrance, 15,892–94. Entrance of 800 feet to proposed harbour not absolutely determined, but considered advisable; 600 feet ought to be sufficient, 15,896–98. Rocks in Sunderland South Bay should be marked by buoys, 15,907–13.

Anderson, Robert, Commissioner of the River Wear. A single harbour of refuge would not answer for saving life and property on this coast; this would be attained to a greater degree by improving the present harbours; a harbour for laden vessels near Flamborough Head would be a great advantage; it might be made either by a breakwater on the Smithic Sand and Bridlington Bay or by lengthening the Steel out at Filey Bay; if the piers of Sunderland Harbour were carried out to 18 feet at low water, light colliers would come in at any time of the tide; also large ships in ballast, in any weather, 15,040. It would be a good outlay of public money to improve the Tyne, the Wear, and the Tees harbours; these, with Bridlington Bay, would be good naval stations in case of war, 15,045. Would prefer the south side of Flamborough Head for a harbour; Flamborough Head is the best place for a harbour for saving life in laden colliers, 15,050–69. If public money be expended, it should be, first, in improving Sunderland, Tees, and Tyne harbours, and then in the construction of a harbour near Flamborough Head, 15,079–82. In 1857 there entered and sailed from the port of Sunderland 21,639 vessels, 15,094. The revenue of the River Wear Commissioners for 1857 was 20,428*l.*, of which 3,000*l.* or 4,000*l.* is applicable to improvements in the river, 15,104–06. A harbour of refuge better in a bay than on a point, 15,110. Proposed piers are not expected of themselves to be sufficient improvement; the river must also be cleansed out, 15,120. Vessels in the coal trade better than they were 40 years ago, 15,122. A harbour at Filey Bay would be good shelter to vessels caught in a south-east gale off Flamborough Head, 15,129.

Ord, T. B., Shipowner, and Commissioner of the River Wear. A general harbour of refuge on any part of the coast would not save life and property to the extent the improvement of the existing harbours would, 15,137. A harbour in Filey Bay would be less useful to laden vessels than one more northward, 15,143. Loss of life on this coast occurs more in light than in laden vessels; light vessels run for their ports, and wait six or eight hours before they can take the harbour; by improving present harbours this would be avoided, 15,145–48. Laden Sunderland vessels sometimes run for the Tyne when not able to make their own port, 15,149. Vessels employed in the coal trade are generally as well found for what they have to do as foreign-going vessels of the same class, 15,161–68. The outlet at the south dock has answered its purpose; this outlet has increased the trade of Sunderland as much as it is likely to increase, 15,175. The proposed piers would not materially increase the trade of Sunderland, 15,182. One-third of the cost of works of improvement would be a reasonable proportion to be contributed by the Wear Commissioners, 15,188. The primage paid by Sunderland to Newcastle is a cause of much dissatisfaction, 15,198. No harbour of refuge south of Sunderland could be made available by ships coming down; they would at all risks pass it, 15,205. A harbour of refuge would be better on a straight course or a cape than at the bottom of a bay, 15,206.

Noble, Alex., Superintendent Harbour-master. Would rather see present harbours improved than one harbour made in a given place, 15,217–19. If it were decided to make one large harbour, it should be near Flamborough Head, 15,220. Land near Hartlepool is dangerous to make, 15,225. If a large harbour of refuge is made it should be capable of holding 1,000 or 1,500 vessels, 15,231–34. The entrance to Sunderland is better than that to the Tees, 15,242. Sand has accumulated in Sunderland Harbour, 15,246–51. Sand will not accumulate at the proposed piers, 15,257, 15,262–64. Most of the north country colliers and vessels trading along the coast are good strong ships, but some are so bad no club will insure them, 15,271–76.

Gray, John, Inspector for the Insurance Clubs of Sunderland. The improvement of the three ports would accomplish more than one limited harbour of refuge, 15,289, 322. In a heavy north-east wind Bridlington Bay affords good anchorage for a large number of ships, 15,300. Runswick would make the best Government harbour on this coast, 15,308. For a harbour for laden ships would prefer Filey to Hartlepool or the Tyne, 15,302, 15,314–16. For laden and light ships the centre of the district between the Tees and Blyth, 15,317. Very few ships sail out of Sunderland so badly found that the clubs will not insure them, 15,329–39. A smaller harbour would suffice for the passing trade than for the passing and port trade also, 15,345. Hartlepool is unfit for the site of a harbour of refuge, 15,351.

Simpson, Wm., Master Mariner. A harbour at Peterhead would be of great service to Baltic and Archangel ships, 15,364. Peterhead is preferable to Wick, 15,367. Three harbours of refuge would be better than one, 15,379–82. If a harbour of refuge were made at Filey Bay, and the three ports improved, a thoroughly good system would be arrived at, 15,383–85. Hendon Bay better than Hartlepool for a harbour of refuge, if one is to be made, 15,395. There should always be a clean beach inside a harbour of refuge for ships to run on, 15,400. Has seen the sea break heavily in Hartlepool Bay in 10 fathoms water, 15,407–09. A harbour of refuge is really necessary for laden colliers in heavy gales, 15,410–15. The proposed improvements of the harbour would be a great benefit to ships trading to the port, 15,490, 91. Depth of water where bar now is would be 18 feet, but not all the way in, which would be a difficulty, 15,496–98.

Henry, Joseph, Pilot. If Sunderland Harbour had three fathoms at low water, according to Mr. Stevenson's plan, much life and property would be saved, 15,423. Would prefer Hendon Bay for the one harbour of refuge, 15,424. Does not approve of Filey Bay for a harbour, 15,433. Ships are more generally caught near Sunderland and neighbouring ports than near Flamborough Head, 15,436. If the harbour must be either at Hartlepool or Filey, would prefer Filey, 15,442. The Tyne is easier to make out than Sunderland, and Sunderland better than Hartlepool, 15,443. If 50 laden ships had to run for proposed harbour, would not hesitate to be one of the 50, 15,448–50. Hendon Bay would make a useful harbour, but it would be better for ships to have their own harbours improved, 15,464–66. Sunderland would be a very good place when proposed works are carried out, 15,478. Present depth of water will be maintained, 15,480. Ships often miss the entrance and go north and south, 15,482. About half of Hendon Bay is good anchorage, 15,488, 89.

Sutton, Thomas, Pilot. Agrees with former witnesses as to the improvement of the three ports being more likely to save life than one large harbour of refuge, 15,504. Prefers Hartlepool to Filey Bay for such a harbour, but prefers the Tyne to Hartlepool, 15,508, 18. A harbour of refuge is fit for neither place, 15,517. Many accidents happen to ships running for Hartlepool, but more between Filey Bay and Sunderland than on any other part of the coast, 15,523–28.

Bolton, Thomas, Lighthouse-keeper to Wear Commissioners. Speaks as to the wrecks off the piers and the prevalent winds, 15,529–49.

Wilson, Joshua, Merchant and Shipowner. Prefers a single harbour of refuge, or two; one should be in Tees Bay; particulars of a storm in 1826, in which 53 ships went ashore between Sunderland and the mouth of the Tees; advocates a harbour in Tees Bay in preference to improving Sunderland or the Tyne; would rather see a harbour of refuge at Redcar; great objection to Hartlepool; any works made there would silt up; it is a mere question of time; a pier parallel to the shore would sand up inside; believes the proposed plan would not improve Sunderland port as a harbour of refuge; with the larger entrance the sand would come in and fill the inside; the best improvement would be a breakwater from Roker to the Knock rocks; the drift would make little or no bar there; Redcar the most likely place to form a harbour of refuge which would not sand up, but only silt up, and the silt would eventually leave Redcar; Redcar is the least objectionable site, 15,553–63. There would seldom be more than 200 or 300 ships come in, and they should be moored tier and tier, 15,564–68. The next best place to Redcar for a harbour of refuge is in Hendon Bay, but Hartlepool would be better if it were not for fear of silting, 15,569–74. To save life and property would decidedly prefer Hartlepool to Filey Bay, 15,575. Prefers Hartlepool for light vessels, and the Tyne for loaded vessels, 15,576, 77. Improvement of Sunderland Harbour much required for the trade of the port; prefers a breakwater from Roker to the Knocks to Mr. Stevenson's plan, 15,578. Statement as to the formation of Sunderland bar, 15,581–89. Mr. Stevenson's pier more likely to accumulate sand than that proposed by witness, 15,594. A bar would form outside the pier heads designed by Mr. Stevenson; the form of the piers would be dangerous to vessels, 15,597. It is difficult to take the entrance with a scant wind at times, because of the freshet out of the Wear, 15,601, 02. A harbour of refuge should be somewhere about Tees Bay, because that is the place ships run for, 15,604, 05. Any alteration in Bridlington Bay would rather injure it than otherwise, 15,606. A harbour of refuge should be in the bight of a bay, 15,607. A site with a tidal river is quite unadapted for a harbour of refuge, because there would be danger of a bar, 15,609–14. If the improvements were all completed there would not be enough tidal scour to clear a channel to sea, with the broad entrance proposed, 15,633. The bar requires to be removed, 15,645. The channel has been excavated 13 feet below Admiralty low-water mark, 15,652. It has been silted up at times, 15,653. Observations within four or five miles of Sunderland indicate the movement of material to be from north to south, 15,660–64. Accumulation in Tees Bay takes place both from north and south, 15,669. The channel to the Tees opens much further to the north than formerly, 15,681. Any artificial work in Tees Bay, except at Redcar, would accumulate sand, 15,683. The great accumulation of wrecks takes place between Blyth and Flamborough Head, 15,687. No difficulty in a ship procuring supplies anywhere in the same range, 15,688, 89. There would be great difficulty in removing a natural bar by dredging, 15,692. Continuous dredging would be required by the plan proposed by witness, 15,693. Mr. Stevenson's piers will intercept the drift, and bring it into the harbour, 15,699. Mr. Stevenson's piers should be shortened; would have a breakwater instead, 15,713–15. 470 acres would be enclosed by witness's plan; at the entrance six fathoms water; though Redcar is embayed, it would be no disadvantage—there are plenty of steam tugs to take vessels out, 15,723–31. Would let the local authorities improve their own harbours, whereby they would improve them as harbours of refuge, 15,735. Filey Bay not likely to silt up, 15,746. In the coal trade the vessels generally are deeper laden and not so well found as foreign-going vessels, 15,748.

Wood, Nicholas, Director of Sunderland Docks. The improvement of existing harbours would tend more to save life than the making of one harbour of refuge; submits a plan of Mr. Murray for protecting the entrance of the dock from north-east and south-east gales; also for a harbour of refuge at Hendon Bay, including area of 800 acres, at a cost of 800,000*l.*; Hendon Bay is a very good place for a harbour of refuge, 15,982. Not liable to silt up, 15,987. Mr. Murray's plans partly auxiliary to those of Mr. Stevenson, 15,997. Proposed piers at south outlet of the dock are detached from the shore, leaving a current to prevent silting up, 15,998. No sand goes inside the dock entrance, 16,000. The old piers of the harbour are wrongly pointed, and invite the sand to enter, 16,001–3. Length of breakwaters at harbour proposed at Hendon would be 2¼ miles, 16,019. A cost of 2,000,000*l.* instead of 800,000*l.* would be fatal to a harbour of refuge in Hendon Bay, 16,024. The works at the dock are well executed and effective, 16,029–32. An external breakwater would convert the south entrance to some extent into a harbour of refuge, 16,033, 34. If Government improve existing

harbours, a proportion of the expense should be borne by the local authorities, 16,035. No money should be spent on one general harbour till the effect of improving the existing harbours be first seen, 16,040. The harbours to be improved should be the Tyne, the Wear, and Hartlepool; Hartlepool a place of considerable trade, 16,041–43. Thinks there would not be much uncertainty as to the result of the proposed works, 16,069–82.

Riddell, James, Resident Engineer of the Sunderland Dock Company. Exhibits a section of the proposed harbour of refuge in Hendon Bay, and estimates the cost, 16,094–97. Proposed piers at south outlet of Sunderland Dock would be advantageous for getting ships into dock, but would be useless for refuge purposes, 16,101, 2. Outer breakwater to be formed of limestone from a quarry close by; could be worked at perhaps eight months in the year, 16,104–23. Proposed slope of the work seaward, 16,133.

Hudson, Ralph, Shipowner and Shipbroker. Concurs with previous witnesses as to the preference for improving the existing harbours, 16,145. The port of Sunderland pays 1,300*l.* a year to the Trinity House of Newcastle, and 600*l.* to the Bishop of Durham, for which no return is made, 16,146–56. There are also many passing tolls, 16,153. The pilotage service at Sunderland might be improved; payment of the pilots, 16,150, 16,175–79. A larger amount of property would be saved by improving the present harbours than by any one harbour of refuge, 16,188. A harbour of refuge in neighbourhood of Filey would not repay its cost, 16,190.

Alcock, Charles, Chairman of Shipowners' Society. If the present harbours could be improved it should be done; there should be one, two, or three general harbours of refuge, but at small cost. One harbour of refuge between Flamborough Head and the Farn Islands should be at Hendon Bay; Murray's plan is preferable to Riddell's; Redcar would be an excellent harbour of refuge for local purposes; one at Filey would be of advantage to ships caught there; there should be three harbours of refuge if present harbours could not be sufficiently improved, 16,195. A harbour of refuge at Filey should hold from 200 to 300 ships, 16,206. Bridlington Bay is a good refuge from north-east winds, 16,209. Would prefer Filey to Hartlepool for a harbour of refuge, 16,212–14. Besides 1,500*l.* per annum to Newcastle, and 800*l.* to the Bishop of Durham, Sunderland pays passing dues to Whitby, Bridlington, Ramsgate, and Dover, for which no advantage is derived, 16,215–35. Sunderland pilotage in a very unsatisfactory state, 16,236–38, 16,243–49. Vessels which cannot possibly enter Ramsgate and other harbours have still to pay the toll, 16,252.

Sparke, George, Shipowner. There should be a large harbour of refuge between Flamborough Head and the Farn Islands; prefers Hendon Bay; but the improvement of the Tyne, the Tees, and the Wear should be done first, 16,272–75. For a harbour of refuge Filey Bay is better than Hartlepool, and Hendon Bay better than Filey Bay, 16,276–79. Sunderland pilots are much exposed to danger, and badly provided for, 16,279–86.

Anderson, James, Shipowner. For a harbour of refuge on the north-east coast of Scotland prefers Wick to Peterhead, 16,301. A harbour of refuge at Wick would be of little use to the Baltic trade, but would be for the general trade, 16,303–7. The three harbours, the Tyne, the Tees, and the Wear, should be improved, but chiefly with a view to saving property, 16,308. A harbour of refuge would be useless on the south side of Flamborough Head, 16,311. No place better for saving life than Hendon Bay, 16,316. For laden ships something more is required than the improvement of the Wear, the Tyne, or the Tees; a harbour of refuge is required for vessels drawing 15 or 16 feet water; if ships go to Hartlepool they only go to be lost; in 1858, 250 sail were driven from the Yorkshire coast to the Firth of Forth, and many much damaged; some provision wanted for similar emergencies, 16,319. A harbour of refuge is necessary, and it should be in this neighbourhood, 16,320. For laden vessels bound south Hartlepool is preferable to Filey, 16,322. There is a reduction in the depth of Hartlepool Bay, 16,324. Conclusion in favour of Hendon Bay, 16,325.

Shepherd, James, Mariner. Much life is lost in laden ships; the greater part of the wrecks are in the neighbourhood of Sunderland; particulars of several which would have been prevented had there been a harbour of refuge, or if existing harbours had been improved; a single harbour of refuge on any part of the north coast would not give sufficient protection to life and property, but if existing harbours were made available at all times of the tide it would be more advantageous to shipping frequenting this part of the coast, 16,337. Hendon Bay is a very suitable place for a harbour of refuge, and the most central point for the coal ports, 16,347–49. Prefers the north side of Hartlepool Bay to Filey, but Redcar to any place except Hendon, 16,352–54. The depth of water is decreasing in Hartlepool Bay, 16,355–60. If Filey Bay is not likely to silt up and Hartlepool is, then of the two would prefer Filey, 16,362.

Hodge, Wm., Mariner. Fully concurs in all the remarks of Mr. Shepherd, 16,370. Would put a harbour of refuge in Hendon Bay even if the Wear were improved, 16,376. Capabilities of colliers in contrary winds, 16,380–403.

Smith, James, Master Mariner. Concurs generally with the two previous witnesses, 16,407. The first thing to be done is to improve the three ports, to enable ships drawing 16 feet water to enter at all times of tide, 16,409. Hendon Bay the best site for a harbour of refuge, 16,410. Capabilities of colliers, 16,412–29.

Robson, Thomas, Master Mariner. Neither of the three principal ports on this coast could be improved so as to make them harbours of refuge, 16,433. There must be one harbour of refuge, and it should be placed in Hendon Bay, 16,434, 42. Mr. Stevenson's plan would improve Sunderland Harbour for local purposes, 16,439. For a harbour of refuge would prefer Hartlepool to Filey, but believes Hartlepool is silting up, 16,443, 44. Serious accidents frequently happen when ships are obliged to heave to, 16,446. Colliers run unreasonable risks, being paid by the voyage, 16,447.

Hurd, Capt., Inspecting Commander of Coastguard, will forward his opinion to the Secretary, 16,449–52.

Brown, Robert, Chairman of the Shipowners' Society. States the cases on which the Trinity House of Newcastle rest their claims as to primage and pilotage dues, 16,455.

SUTHERLAND, ALEXANDER. *See* DOUGLAS.

SUTHERLAND, JOHN. *See* WICK.

SUTTON, THOMAS. *See* SUNDERLAND.

SWANSEA (Witnesses examined at):

Benson, —, Chairman of the Harbour Trust. Statement respecting the trade of Swansea; all the Welsh ports being tidal harbours, vessels are not able to get in at low water, therefore a harbour of refuge is most important; one more wanted on the north coast than on the south; no other port so accessible at all times of tide as the Mumbles, 10,925. A harbour of refuge at the Mumbles important for the whole Channel, 10,928. Would save many lives, 10,932.

Lowther, William, Harbour-master at Neath. A harbour of refuge at Mumbles would be of great advantage, more than at Lundy or Clovelly, 10,944. Lundy will answer its purpose as it is, 10,945. Ships would make for a harbour of refuge at Mumbles rather than keep the sea of a dark night, 10,946. A harbour either at Padstow or St. Ives would be good for coasters, 10,957. Good holding ground at St. Ives, 10,965. Dangerous for ships to lie in Swansea Bay, 10,984. Advocates a harbour at Mumbles to relieve Penarth Roads, 10,991. A breakwater would save property, but not much life, 11,002. There is good anchorage ground in Oxwich Bay, 11,009. Oxwich Bay is clear of shoals, 11,025. With a breakwater half a mile long there would be more room at the Mumbles than at Oxwich Bay, 11,029. A harbour of refuge at St. Ives Bay would save life and property, 11,040. Captains are afraid of Lundy, 11,047. Would divide the money to be spent between St. Ives and Swansea, 11,055. There are facilities for saving life above Lundy which do not exist between Cape Cornwall and Hartland Point, 11,061. Few ships would take Clovelly even if a breakwater were made, 11,068. Lundy would be of less use with a breakwater than it is without, 11,073. Many vessels lie at the Mumbles exposed to great risk, 11,083–89. The best place in the Bristol Channel for a refuge harbour would be the Mumbles, 11,099–104. Can go further in with a deep ship at Oxwich Bay than at the Mumbles, 11,116–19. Oxwich Bay can accommodate only a few ships, 11,127. The vessels which lie at the Mumbles are those driven out of Swansea Harbour to wait for a wind, 11,135. Prefers the Mumbles to Oxwich Bay, 11,142–47. No ships will take Lundy to ride there in winter, 11,160. Penarth Roads are much frequented, 11,171. Vessels frequenting Penarth Roads met by adverse winds on reaching Lundy

Island, fetch Milford or run back to the Mumbles, 11,173. If a single harbour only were to be made it should be at the Mumbles; it would protect more trade than anywhere else, 11,178, 79. Would place another at St. Ives, 11,180. Has never known vessels take shelter at Oxwich Bay, 11,188. A harbour of refuge at the Mumbles would suffice, 11,190. Milford Haven is a good harbour, but difficult to enter and leave, 11,200–202. The trade of Swansea would not object to pay a small toll for a light on the Skerwether Sands, 11,211.

Powell, William Llewellyn, Mariner. To save life and property Mumbles is the place for a harbour, 11,221–23. Instances of lives lost for want of a harbour there, 11,224–31. Lundy a bad roadstead, 11,233. Milford Haven a fine harbour, but difficult to make in thick weather, 11,236–39, 11,257, 58. A breakwater run east from Oxwich Bay would enclose more water than one from the Mumbles, 11,247–52.

Abernethy, James, Engineer-in-chief of port of Swansea. Considers it imminently necessary to construct a harbour at the Mumbles; proposes a mound of copper slag to the level of 12 feet below low water, with a timber framework to 10 feet above high water, and behind or within this half logs of creosoted timber, the interior packed close with rubble or copper slag; such a breakwater would last 50 years, might be used as a core for a permanent structure, and would not cost more than a mere timber platform for depositing the material, 11,265–82. Would leave an opening in the breakwater as a passage for the tide, so as not to interfere with Mixon Shoal, 11,298. Does not think Swansea Bay is silting up, 11,299. If the breakwater were connected with the mainland the bay would silt up, 11,305. Estimated cost of proposed breakwater to last for 50 years, 650,000*l.*, 11,312, 13. The additional cost of two stone walls to make it permanent would be 250,000*l.*, 11,314. The whole length of the structure would be about 2,300 yards, 11,329. A breakwater from Oxwich Head would give more anchorage ground than one from the Mumbles Head; but prefers the Mumbles, 11,344–47. The cost of proposed breakwater about 112*l.* per lineal foot, 11,352.

Stribley, John, Shipowner. The Mumbles the best place in the Channel for a harbour of refuge, 11,382, 407. Such a harbour would be of great advantage for both outward and homeward ships, 11,383–86. Penarth Roads is safe, but fast silting up, 11,391, 11,432–36. Not easy for a stranger to make at night, 11,392. Lundy not a desirable place to anchor; bad holding ground, 11,401. No safer place in the Channel than Penarth Roads, 11,403. Good anchorage, 11,419. Vessels are crowded there, and get foul of each other, 11,418–22. The crowding would be relieved by a breakwater at the Mumbles, 11,426. Milford Haven a good harbour, but not safe to run for in foggy weather, 11,395–98. Lundy not a desirable place to anchor in, 11,401. Moorings there would be of advantage, 11,431. Could not be made a useful harbour, 11,463. Would run for Clovelly if there were shelter there, 11,437. Padstow would be the best position for a harbour for saving life between St. Ives and Hartland Point, 11,442. The difficulty at Padstow is the want of a true wind to get in, 11,445. More lives would be saved by a harbour of refuge at Padstow than elsewhere, 11,448. If the point were cut away, so as to give a true wind, vessels could shoot in and anchor in safety, 11,472. A harbour at Port Quin Bay would save life and property, but would sand up, 11,454–62.

Crewe, Capt. *Read*, R.N., Inspecting Commander of the Coast Guard at Swansea. The Mumbles is the most advantageous position for a harbour in the Bristol Channel, 11,481. It is the best site for a naval station, far better than Clovelly, 11,489, 92. One refuge harbour would not answer; there should be two: at the Mumbles and St. Ives, 11,497–500. A steam vessel of war at the Mumbles would be sufficient defence for Welsh ports, 11,505. A sheltered roadstead at the Mumbles would relieve Penarth Roads, 11,511. Ships will go where there is good anchorage, without naval protection, 11,519. Not sufficient accommodation in Penarth Roads; vessels foul each other for want of space, 11,535–37.

Richardson, James, Chairman of Swansea Mercantile Marine Surveying Association. The Mumbles the best place in the Bristol Channel for a harbour of refuge; it would prevent many calamities; would have saved some of his own ships, 11,547–55.

Rosser, John, Deputy Harbour-master. Prefers the Mumbles as a site for a harbour of refuge, 11,570. Oxwich Point is flat and dangerous, 11,577. 700 sail might lie in safety, aground and afloat, within the breakwater suggested by Mr. Abernethy; 200 of them afloat at low water, 11,579. Does not think the bay has silted up much, 11,587–608. No difficulty in dredging away Greenground Shoals, 11,591. There is good holding ground here, 11,595. Every facility at Swansea for repairing damaged ships, 11,605. If entrance to Padstow were improved it would be very valuable, 11,616. Padstow would be a good place to run for in stress of weather if the point were cut down, 11,621. Prefers Padstow to St. Ives, 11,622. If improved would be used by all vessels, 11,627.

Watt, James, Master. A harbour of refuge very necessary in the Bristol Channel, 11,634. Penarth Roads a good place for a stranger to run for at night, 11,636. Milford Haven good to make if the lights can be seen, but entrance not wide enough, 11,640. No accommodation at Padstow, and bad entrance, 11,642. Clovelly too far embayed; a bad place to make, 11,647. Mumbles Bay much better as an anchorage than Oxwich Bay, 11,654. Vessels will not run in for Padstow if they can get elsewhere, 11,664.

Simpson, Joseph Hood, Agent. A breakwater in Mumbles roadstead to enable vessels to lie afloat would be better than letting them lie aground, 11,670.

Francis, Geo. Grant, Merchant. Statistics respecting wrecks in the Bristol Channel; the Mumbles roadstead the best locality for a judicious outlay of public money; great facilities for the erection of batteries at the Mumbles; a lighthouse there; ample supplies of ships' stores at Swansea; instance of a ship leaving the Mumbles and going to Cuba and back, while another leaving Penarth at the same time only got to the Mumbles, 11,679. Oxwich Bay difficult of access by land, 11,680.

Aldridge, Capt. *Geo. Menby*, R.N. No spot in the Bristol Channel so desirable for a harbour of refuge as the Mumbles, 11,708–9, 11,732. Mumbles the best point of departure for outward-bound ships in prevalent winds, 11,710. Nothing arising from survey just completed which renders it unadvisable to erect a breakwater in Swansea Bay, 11,716–19. No reason to suppose the shoals would return if dredged away, 11,720–24. In preparing a harbour of refuge the dredger must be used liberally, 11,725. A harbour could be made in Swansea Bay for large vessels, and would be a great boon to the trade of the Channel, 11,728. Money could not be laid out at a better place, 11,731. Does not think the water in the bay is becoming shallower, 11,733–41.

Jones, Matthew, Master. Prefers the Mumbles as the site for a harbour of refuge, 11,747. Penarth a safer anchorage than the Mumbles at present, 11,751.

TALBOT, WILLIAM. *See* HULL.
TAYLOR, THOMAS JOHN. *See* LONDON.
TEMPLER, EDWARD. *See* BRIDLINGTON.
TENNANT, HUGH. *See* GLASGOW.
TERRELL, WILLIAM. *See* BRISTOL.
THOMAS, WILLIAM. *See* BRISTOL.
THOMPSON, —. *See* PORTRUSH. LIVERPOOL.
THOMPSON, GEO., jun. *See* ABERDEEN.
THOMPSON, THOMAS. *See* REDCAR.
THOMPSON, W. *See* BELFAST.
THOMPSON, WILLIAM. *See* LEITH.
THOMS, THOMAS. *See* CARDIFF.
TINDALL, JAMES. *See* STONEHAVEN.
TIPPETT, Lieut. *See* BELFAST.
TOSE, WILLIAM. *See* WHITBY.
TOTTENHAM, —. *See* BELFAST.
TREADWIN, JOHN. *See* PADSTOW.
TREMEARNE, JOHN N. *See* ST. IVES.
TROTTER, CHARLES. *See* REDCAR.
TUDOR, JOHN. *See* WICK.
TULLY, ROBERT. *See* NORTH SHIELDS.
TURNBULL, JAMES. *See* GLASGOW.
TURNER, ANGUS. *See* GLASGOW.
TURNER, SAMUEL. *See* BIDEFORD.
TURNER, WILLIAM. *See* LONDON.
TYNE COMMISSIONERS, MEMORIAL OF. *See* LONDON.

VEALE, WILLIAM. *See* ST. IVES.
VERRILL, RICHARD. *See* WHITBY.

WAKE, W. *See* NORTH SHIELDS.
WALKER, CHARLES ARTHUR. *See* WEXFORD.
WALKER, D. *See* MONTROSE.
WALKER, J. *See* LONDON.
WALKER, JOHN. *See* DUNDEE.
WALKER, ROBERT PHILIP. *See* LONDON.

Wallis, John. *See* Bridlington.

Ward, William . *See* Whitby.

Ware, James. *See* London.

Waterford (Witnesses examined at):

Farrell, John, Secretary to Harbour Commission. Desirability of deepening the harbour, 7298–7300. Engineer's proposal and estimate for the work, 7317. Present amount of harbour income, 6,000*l.*, 7333. The Harbour Commissioners cannot contribute to the improvement of the bars; the harbour is sufficient for the local trade, 7339, 7340. If the proposed cut be carried out, many vessels passing would enter the river for refuge, 7345, 7352. Minutes of Harbour Board on Mr. Stephens' plan handed in, 7365. Amount paid to pilots in 1857–58, 7747. The pilot fund is too expensive, 7749.

Stephens, Abraham. Made borings in bar in 1851 and 1854, 7381, 7383. Nature of the ground, 7387, 7395. By removing the bank on the east side there would be 20 feet at low water all away to sea, 7397–7399. The bottom could be easily dredged, 7417–7436. The proposed cut would produce a greater scour by increasing the ebb tide, and would deepen the harbour, 7440. Vessels frequently lose their rudders crossing the bar in a heavy sea, 7443. The borings in 1854 produced the same result as those in 1851, 7483–7485. Ships frequently come in for refuge with south-east winds, 7505. Has known the bar 40 years; its depth has not changed, 7508–7511. Recommends a breakwater from the old fort at Passage to the Spit Perch; if stones were run out from old fort they would double the force of the scour, and ultimately deepen the harbour, 7512. The tide would set more truly through a cut more to the east, 7516. The ebb tide is much stronger than the flood, 7523, 7524.

Price, Capt. *W.*, Lloyd's Surveyor. Captains would have come to Waterford Harbour, but for want of water, and ships have been lost for want of shelter, 7540–7543. If the harbour were deepened large ships would use it, 7546, 7547. Waterford very desirable as a harbour of refuge in south-west gales, 7548. Many damaged vessels come to Waterford for repairs, 7560. If the channel were deepened to 20 feet, ships of 17 feet draught could enter over the bar, 7572. At Waterford, with a fair wind for ships to put back, the ordinary changes would give a fair wind to go out again, 7577. Plenty of room in the channel for as many vessels as would take refuge; very fine anchorage, 7581–7583. 400 yards should be the least breadth of proposed channel, 7597. The least depth should be 22 feet, 7602. On the south coast of Ireland most wrecks occur between Waterford and Saltees, and on Tramore Sand, 7604, 7605. The approaches to Waterford are well lighted, and the channel well buoyed, 7620, 7621. Recommends colouring the Hook light, 7622.

Bathurst, Captain, R.N. The wrecks at Tramore Bay not so much caused by stress of weather as by vessels mistaking the bay for Waterford Harbour, 7646, 7647. Wexford a worse place for wrecks than Tramore Bay, 7650. There would be no fear of mistake if the landmarks were altered, 7669.

Alcock, Edmund Henry, Pilot Master. Agrees with the evidence of Captain Bathurst, 7685. Pilot establishment at Waterford stated, 7687. Ships avoid Waterford Harbour, being afraid of the bar, 7689. If the anchorage were improved, it would be more used, 7690. There should be a life-boat or a rocket station at Dunmore, 7710. If the channel were deepened to 20 feet there would not be so much broken water, 7714. There is good anchorage up from Duncannon Fort, 7718. More loss on the Wexford coast than in Tramore Bay, 7725. The towers on Brownstown Point should be removed, 7727. The Hook tower should be coloured, 7734.

Murray, John, Pilot. Agrees with evidence of Mr. Alcock, 7760. There ought to be 22 feet of water to enable large ships to enter the port, 7762. The two towers on Brownstown Point should not be removed; they are especially useful in thick weather, 7764–7766, 7771. Prefers the Hook tower being left white, as it is, 7767. Has boarded vessels that have been afraid to come in for want of water, 7776. No change of depth for 40 years, 7777. Good holding ground, 7793. Tramore Bay might be easily mistaken for Waterford Harbour, 7799. Would prefer the channel to be deepened in the present line of leading marks, 7809. Channel should be 400 yards wide and 22 feet deep, 7812–7816.

Mitchell, Samuel, Master of Pilot Cutter. Ships disabled in strong winds dislike putting into Waterford on account of want of depth, 7833. Rates of pilotage at Waterford, 7836–7841. Nature of anchorage ground, 7844–7848. No change of depth for 20 years, 7849.

Hassard, —, M.P. for Waterford. If large vessels could get over the bar it would be of great service; they could then lay alongside the railway; if the bar were deepened to 22 feet this might be done, 7851–7858. Trusts shortly to have a life-boat in Tramore Bay, 7851.

Waterson, John. *See* Douglas.

Waterson, John, junior. *See* Douglas.

Watson, Leonard. *See* Douglas.

Watt, James. *See* Swansea.

Wawn, John T. *See* North Shields.

Webb, William, C. *See* Cardiff.

Weir, William. *See* Bridlington.

Welch, George. *See* Dundee.

Wexford (Witnesses examined at):

Walker, Charles Arthur, Harbour Commissioner. Advocates the construction of an auxiliary harbour of refuge at Ballygeary, 7864, 7866.

Devereux, Mark, Pilot Master. No changes have taken place in the banks at the entrance of the harbour, in his knowledge, 7872–7882. Since the embankment was made in the harbour the shoals have increased, and made the approaches to the harbour worse, 7884–7888, 7896. The sea breaks away the sand beach, 7905. The channel is properly buoyed, 7919. There is no more width in the Hantoon Channel since the dredging began, 7956. The channels have become worse within the last three or four years, 7979–7984. There has been no change in the main channel, 7988. If the dredger had worked more continuously it would have done some good, 7998–8003. Ballygeary Bay an eligible site for a harbour of refuge; it is formed by nature for a harbour; good water through south channel for ships drawing 20 to 24 feet, 8023, 8024. Fishermen would be benefited by a harbour of refuge near their fishing ground, 8025. The protection in South Bay perfect in a south-west gale; excellent holding ground, 8029–8031. South Bay should be buoyed, but there should be a breakwater as well, 8035. Breakwater especially required in north-east and south-east winds, 8058. A light ship is wanted in the centre of the channel, 8067–8069. With such a light more vessels would come, 8070. Prevalent winds, 8078–8084. If a vessel went on shore between Greenore Point and Rosslare life would be saved invariably, 8364.

McCan, —, Harbour-master of Wexford. With exception of the Downs, more trade passes by Wexford than any other part of United Kingdom, 8095. If the access to the port were better, vessels would resort to it for refuge, 8099. Ballygeary Bay should be made a harbour of refuge, 8104. Vessels could not ride safely in South Bay in a south-west gale, 8106. Winds and weather, 8122–8127.

Boen, Martin, Pilot. Many vessels have passed the port because the access was not easy, 8135–8138. Only vessels drawing 6 or 7 feet can come into the harbour at low water in any weather, 8140–8142. Hantoon Channel is most used, and the safest, 8143, 8194. Good anchorage in South Bay, 8152–8159. South Bay would be better with a floating light inside Holder's Bed, 8167–8170. It is the finest place in the world for a pier, 8175. All the work at Wexford should be to deepen Hantoon Channel, 8195. It would be a great advantage to reduce Gall Bar to same depth as Hantoon Channel, 8205. There has been no silting up of the channel since the formation of the embankment, 8222. Hantoon Channel preferable to the other; there is not so much sea, and a ship would be safe if she did go ashore, 8233. Beach from Greenore Point round to Rostare Point is good; if a vessel went ashore there life and property would be saved, 8415–8417. Has never known life lost from shipwreck in Ballygeary Bay, 8419.

Clarke, W., Shipmaster. Has entered Wexford Harbour when blowing hard; uses Hantoon Channel, which is protected by Dogger Bank, 8251–8256. A light in South Bay would be an improvement, 8265. The dredger has improved the channel, 8274. Hantoon Channel is the one which should be improved, 8280–8284. The banks southward of the bar have shifted, 8294. Hantoon filled up considerably before the dredger came, 8296. It would be a great improvement to bank off the Dogger so as to make it permanent, 8302–8309. Has had to run for Waterford in a gale when he could not make South Bay, 8312. Additional shelter is much wanted in this neighbourhood, 8318. Has known vessels run to Holyhead and Kingstown, and put back to Liverpool, for want

of shelter at Wexford, 8319. A light inside Holder's Bed would be desirable, 8336. A breakwater would tempt vessels to use the harbour, 8343. Vessels would not object to a light toll; the toll on lights is small, 8347. A light vessel would not drag her moorings if placed at south-east corner of Holder's Bed, 8355. If a vessel went on shore from Greenore Point up to Wexford, life would be saved, 8359, 8360.

Roach, Edmund, Master Mariner. Hantoon Channel the safest, 8386. Has seen it with better water, 8395. Recommends the Dogger Bank being piled, 8400. One line of piles would be sufficient, 8404. The worst weather in Irish Channel is in winter with south-west gales, 8405.

Farrell, James Barry, Engineer. Dredging commenced in first week of July, 8425. 8,000 tons have been raised, 8426. An obstruction in Hantoon Channel has been removed, 8430. Dogger Bank should be piled in the direction of ebb and flood tides, which would produce a fine entrance, 8433, 8434. Both Hantoon and the North Channels should be kept open, 8441. Gull Bar should be deepened equal to Hantoon, 8442. Deepening Coal Channel would be attended with serious disadvantages, 8449. Every endeavour should be made to improve Hantoon Channel, 8450. To pile the Dogger Bank would assist the work of nature, 8454. When Dogger Bank was covered with bent grass there was a good entrance into Wexford, 8458. If the Coal Channel were adopted, more convenient works could be had than on the North Channel, 8465. About 18 inches depth has been gained in Hantoon Channel by the dredging, 8469. The immediate removal of a shoal was essential to the trade of Wexford, and dredging was commenced without proper appliances, 8475–8480. Deepening Hantoon Channel is the proper course to pursue, 8484. The south-east channel should be shoaled up; this is essential, and would cost about 30,000*l.*, 8487–8490. Stone banks would be much more expensive than piling, 8492–8498. A fortnight more dredging will gain two feet in the Point of Rosslare, 8515. His object is first to deepen Hantoon Channel and then to pile round Dogger Bank, 8521. Would improve present sailing channel, 8525. An embankment on either side the channel would be useful, conditionally, 8527. Every foot of water coming into the harbour at neap tides is necessary to preserve the entrance, 8533. No damage has been done to the harbour by the construction of the present embankments, 8539. Believes the breach into the channel was caused by the bent grass being torn up, which should be strictly prevented, 8541–8547. The dredger was put to work in Hantoon Channel in consequence of a representation that Wexford Harbour was all but sealed, 8554, 8555. The cut into the Coal Channel would cost about 27,000*l.*, 8569, 8570. It would be better to improve the present entrances to the harbour than to spend money on the proposed experiment in South Bay, 8576. Carnsore Point is the place where a harbour of refuge should be made, but it would cost 500,000*l.*, 8577–8579, 8623–8626. Wrecks are frequent there, 8581. If the piling succeeded, and was continued as the Dogger Bank extended itself, the South Bay would be made a refuge harbour, 8585. If a cut is made to join the deep water in Coal Channel, the North Channel will become shoal, 8588. If the current of the South Channel is increased, the Hantoon Channel will be obstructed, 8592. The piling of Dogger Bank will guide the whole stream into Hantoon Channel, 8594. South-east gales throw up sand on west side of Dogger Bank, 8599. Soon after dredging was commenced a better tide was brought into Hantoon Channel, 8602. Dogger Bank was higher in 1855 than now, 8603. Would place the piles herring-bone, very near, filling up the back, 8606. The piles would remain permanent, 8613. The main channel was formerly where the Dogger Bank now is, 8614. The future shifting of the bank would be stopped, by means of piling, 8615–8617. An island once existed where the bank now is, and would have remained if properly preserved; by piling, planting and encouraging bent grass it may be re-created, 8618. The present is the normal position of the bank, 8619. Dredger will remove 112 tons per hour, 8636. The piling might be done in sections, and gone on with or stopped, without injury to the entrance to the harbour, 8643, 8644. It is not true that the dredger lost 40 fine days, 8651. If piling operations were commenced, the swashway should be enclosed at once, 8656. This would continue the deposit on banks already formed, 8658. If piling and dredging were carried on, the bank would soon be dry, 8659. Piling would cost 40*l.* per yard, and the shortest length which would be of use would be half a mile, 8668, 8669. Three lines of piles proposed, to be screwed below the depth of the channel, the top five feet above high water, 8671–8675. With cross planking and other ties, 8676. Report of witness in 1846 relative to removing the old bridge at Wexford and building a new one is being carried out, 8679–8682.

Redmond, John Edward. Originated Harbour Embankment Company; the original entrance to the town was on the Coal Channel, which might be again made, without interfering with Hantoon Channel; cost would not be excessive, 8689. If the Coal Channel were deepened to 18 feet at low water it would not affect the present sailing channel; there is no silt in the Slaney, 8691, 8692. The slob land could not be enclosed with profit, 8695. If the channel were deepened to 18 feet up to the quay, the trade of Wexford would be much increased, 8700. Doubts the good effect of making the bank into one island; suggests a stone embankment to the north, 8704, 8705. Deepening the Coal Channel would have much effect in deepening the outside, 8708. Agrees with witnesses in value of the Hantoon Channel, 8712. If the deep Coal Channel were connected with the deep channel above Gull Bar, a fixed entrance would be secured, 8716. It would be a great object to get the south embankment made, 8717. Proposes a breakwater inside Raven's Spit, which would give great facilities to vessels entering, 8728. Probable cost of proposed embankment something less than 40,000*l.*, 8738.

Coglar, William, Collector of Customs. Will furnish a return relative to vessels arriving, &c., at the port, 8760–8764.

Adams, Richard, Harbour Commissioner. Will supply an account of the harbour revenue, 8765–8768.

WHITBY (Witnesses examined at):

Harrison, Thomas Elliot, Civil Engineer. Submits a plan for a great national harbour of refuge to be entered at all times of tide, in all winds, and with good anchorage; estimated cost, 1,750,000*l.* A portion of this plan is advocated by the magistrates, &c., of Whitby; would cost 300,000*l.*, and would afford shelter of various capacity from various winds; an integral work by itself, yet forming part of the entire scheme; 600 or 700 vessels per annum at present use Whitby Harbour for refuge, though exceedingly difficult of access; the proposed breakwater would deepen the entrance at least two feet, and render the entrance easy, 20,442. Facilities for the construction of the breakwater, 20,448–51. No doubt as to durability of the works, 20,457. Explanation of proposed method of construction, 20,461–73. Estimated cost of the work, 20,474–77. The proposed plan is more suitable for a general national harbour than any other heard of along this coast; there is no local purpose to which it would be at all subservient, 20,482, 88. A well-constructed harbour at Filey would not answer all the purposes for saving life and property along this coast; Whitby is better situated, 20,495–97. The southern portion of proposed plan might be formed in four years; the whole scheme in seven or eight years, 20,505–10. A harbour of 400 acres might be made by carrying out a breakwater from the Upgang Rock, 20,512. For saving life and property, the breakwater upon the Whitby rock alone is advocated, 20,523. There is no difficulty in making a harbour by means of the Upgang Rock, but doubts the necessity, as to the question of saving life and property, 20,535. The present harbour might be improved by dredging, but the foundation of the piers would not admit of dredging without undersetting, 20,540, 41. The Esk brings down but little deposit; the freshets are very heavy; the passing tide would carry any deposit away, 20,548, 59. For saving life and property, a harbour contained between proposed south-east breakwater and the Upgang Rock would be sufficient, 20,567–70. The bottom is good anchorage all over, 20,578. Further explanations as to procuration of materials, method of construction, and cost, 20,588–607.

Smales, Gideon, Shipowner. Chairman of Committee respecting harbour of refuge at Whitby; no more suitable place on this coast for a harbour of refuge than Whitby; the smaller scheme would give shelter for a considerable number of vessels; loaded ships nearly always reach Whitby before the wind fouls, and both light and loaded ships haul in for land off Whitby; witness orders all his captains never to bear up for the northern ports with a loaded vessel; the loss on the coast is more in light ships than in loaded ones; advantages of Whitby over Filey; Whitby is now a harbour of refuge to a considerable extent, and would be more so if the breakwater were made; though the trade of the town would not be benefited, 2612. The improvement of the existing harbours would tend more to save life and property than one great harbour of refuge, 20,615, 20,646, 47. Filey Bay would be of little use as a harbour of refuge for light ships, and very few loaded ships would take it, 20,621–24. Reasons for preferring Whitby to Filey, 20,623–36. Prefers Hartlepool to Filey, and Whitby to Hartlepool, 20,637, 38, 20,666. Within the last three years nearly 2,000 vessels have come into Whitby for refuge, 20,642. A harbour of refuge to shelter 200 of the largest colliers from every wind would be sufficient, 20,669. Two small harbours would be better than one larger, 20,672. Prevalent winds on the coast, 20,673–79. From 200 to 300 sail is all a general harbour would be required to accommodate, 20,681. Instructs his captains never to run into the bight of a bay, nor back when loaded into the coal ports; to keep the sea, if possible, and if not to run for the Firth of Forth, 20,682.

Robinson, Henry, Shipowner. Better to improve the ports along the coast than to make any single harbour of refuge, 20,692. Whitby is the best position for a harbour of refuge between Flamborough Head and Tynemouth Castle, 20,694. As regards life, refuge is more required for loaded than for light ships, 20,697. Whitby Rock, to some extent, forms a refuge from E.S.E. winds, 20,704–11. A harbour to the north of Whitby would be better than one to the south, 20,713, 20,759–61. Hartlepool is not a good site for a harbour on account of the shallow waters, 20,720. Would give Redcar the preference, 20,722. A harbour of refuge is not necessary between Aberdeen and the Pentland Firth, as the firths are easy of access, 20,726. The trade of Whitby would be benefited by the improvement of its harbour, which would be useful to light vessels running down on this coast, 20,746.

Tose, William, Harbour-master. For saving life would prefer the improvement of the several ports to one large harbour of refuge, 20,782. A harbour of refuge at Whitby would save many ships and lives, 20,785. A harbour further north should be about Sunderland, 20,790. Prevalent winds on the coast, 20,802–06. Statement of number of vessels entering Whitby Harbour for refuge in 1855, 1856, 1857, and 1858 up to October, 20,814–18. The proposed breakwater would enable vessels to enter the harbour in the greatest safety, 20,821. At present, pilots have great difficulty in getting out in bad weather, 20,822. The harbour is accessible to ordinary vessels for 10 to 12 hours out of the 24; if it were dredged three or four feet it would be accessible 14 or 15 hours of the 24, 20,831–40. The upper harbour will accommodate about 300 sail, the lower 80 or 90, 20,841, 42. Depth of water on the bar, 20,858, 59. The bar silts up a little at times, but is cleansed by the land water, 20,860, 62. By dredging, four feet more water might be obtained, and the harbour be made more available for refuge, 20,871–77. Harbour dues paid by vessels, 20,888. The water at Hartlepool too shallow for a harbour of refuge, 20,889–94. Hartlepool is too far to the north, as Filey is too far south, 20,895. If there is to be but one harbour along the coast, it would be large enough if it held 300 sail, 20,899. Filey and Redcar would be better sites than Hartlepool, 20,902–06. Whitby is the place where shelter should be given, 20,916. The proposed southern breakwater does not join the shore, as there is a passage called the Sledway, worth preserving, 20,918, 19. With this breakwater ships would be safe in the lower harbour, 20,922, 25. Vessels in ballast coming in to load, discharge their ballast in port, sometimes too close in, 20,953–57. Pilot establishment, 20,962–65. Life-boats, 20,976–82. To give refuge it would be necessary to deepen the harbour up to the bridge, 20,988. The channel is difficult to take on account of its crookedness, 20,990, 91. The material dredged from the harbour is muddy silt, 21,018–23. Hartlepool Roads have silted up very much during the last 17 years, 21,036–44. Ships in the coal trade are not generally so well found as the foreign-going vessels, 21,046–51. Laden colliers often founder, 21,053, 54. Men in a leaky ship after knocking about four or five days would be glad of a harbour at Filey or anywhere else, 21,060–65. Runswick Bay would make a good harbour for its size; it has good holding ground, 21,089–97. Cannot explain the variations in the soundings marked on the chart, but knows it is all good holding ground, 21,098–120.

Barrick, George, Ship Owner and Builder. Whitby the most eligible position on this coast for a harbour of refuge, 21,131. The most desirable system would be to improve all the existing ports, 21,132–34. Even if the breakwater on Whitby Rock were constructed, vessels would be in a bad anchorage and exposed, 21,136. The roads are excellent anchorage, 21,138. The proposed large plan would make one of the finest harbours in the kingdom, 21,145. The harbour is most needed for laden ships, 21,147. Light ships can run ashore and save the people wherever there is a sandy beach, 21,148, 49. Even with plenty of water there is great risk in running into a bar harbour between long piers, 21,160. It would be very difficult to make bar harbours safe to run into in gales, 21,166. Prevalent winds on this coast, 21,167–77. A distribution of harbours, if improved, dangerous as bar harbours may be, would be better than a monster harbour, 21,179–84. To save life and property, harbours at Filey and Hartlepool would be better than one large harbour, 21,189. A harbour at Whitby would not save ships caught between Flamborough Head and Whitby Rocks, 21,190–99. For only one harbour would prefer Hartlepool to Filey, 21,201. Runswick Bay would be a good shelter for fishing vessels, 21,212. The best way to save life between Flamborough Head and the Staples would be to improve the existing harbours, 21,214, 15. An increased depth of six feet on the bar would be a great improvement to Whitby, 21,218. Bridlington Bay might easily be improved, 21,229. Would run for a refuge harbour at Hartlepool Bay if he could not keep at sea, 21,238–40. Two small harbours would be better than one large one, 21,245–47. If the Tyne were deepened to 15 or 16 feet, with a small harbour in the bay, and another further south, the wants of the coast would be supplied, 21,248–50. If a harbour to save life and property be constructed between Flamborough Head and Tynemouth it should be at Whitby, 21,268–79. The next best site would be Hartlepool, 21,272. Prefers Whitby to all the ports on the coast, Hartlepool next, and Filey next, 21,284–91. It would be worth a moderately large expenditure if 13 to 15 feet at low water could be got at the Tyne, 21,296–301. Vessels employed in the coal trade have generally been employed previously in the foreign trade, and are generally of very good class, 21,303–11. Has never known a collier to be broken up; they are continually repaired, 21,327–33.

Smith, William Broderick, Shipowner. No better harbour could be made than that proposed by Mr. Harrison, 21,337. The breakwater upon Whitby Rock would be of great advantage as a refuge for laden vessels bound south, 21,338. Whitby is a better place for a harbour of refuge than any other, as vessels leaving the northern ports generally get as far as Whitby before the gale comes on, 21,345–47. A refuge is more wanted for laden than for light ships, 21,348. Particulars of vessels wrecked in trying to reach the northern ports, 21,350. Prevalent winds, 21,352–58. Whitby Harbour would be much improved by proposed breakwater, 21,359. If there is to be one great harbour of refuge, prefers Hartlepool to Filey for the site, 21,371. If the same area of deep water could be obtained at Redcar as at Hartlepool, would prefer Redcar, 21,373. The improvement of two or three of the existing harbours would be better than one large harbour, both for trade and for saving life, 21,374. The first point should be to make a refuge for laden vessels near Whitby; next to improve the existing harbours, 21,377, 78. Would decidedly prefer two harbours to one, 21,379, 80. In the gale of 1857 many vessels would have been saved had there been a harbour of refuge at Whitby, 21,392–98. Particulars of vessels then lost, 21,401–19. Very desirable to improve the entrance into the Tyne, 21,427. Filey Bay would shelter vessels caught off Flamborough Head; Whitby those between Filey and Whitby; Tees Bay those between Whitby and Hartlepool, 21,435–37. After Whitby the most likely place to save vessels is Tees Bay, 21,441.

Ellis, James, Pilot Master. Whitby the most suitable locality along the coast for a harbour of refuge, 21,452. Concurs with the two previous witnesses as to the advantage of a breakwater on Whitby Rock, 21,456. The larger plan would answer better, as it would take any kind of vessels in all storms, 21,457, 58. A harbour most required for laden ships, 21,460. There is good anchorage ground in Whitby Bay, 21,465, 66. No difference in its depth for the last 15 or 20 years, 21,474. Very little silt comes out of the harbour, 21,476. With easterly gales mud accumulates on the bar, 21,482, 83. The bar may be deepened to any extent by a dredger, 21,485. Has seen vessels cast their ballast outside the harbour, 21,494. Pilot establishment at Whitby, 21,496–502. Southern portion of proposed breakwater would be a great benefit to roadstead and harbour, 21,506. A refuge here would have saved the vessels lost in the gale of January 1857, 21,507–10.

Storm, Sampson, Shipmaster. If there is to be but one large harbour it should be at Whitby, 21,532. Pier harbours are always dangerous, 21,533. Rather than take a bar harbour in bad weather, has twice preferred being driven to the firth, 21,535. Harbours of refuge are chiefly wanted for laden ships, 21,538. Several smaller harbours would be better for saving life than one large one, 21,554. Prefers Filey for a harbour to Hartlepool, 21,555. Harbours are not wanted as ports of loading, 21,556. Most of the vessels lost in the bight of the bay have been a good way to the south, and have been driven back, 21,557. A harbour at Filey would be of more use than one in Hartlepool Bay, 21,561. Would sooner run for a harbour with no tide than for the Tyne, even if deepened, 21,563. It would be dangerous to attempt the Tyne at ebb tide, even if the piers were carried out to 25 feet depth; would sooner risk going to the firth, 21,565, 66. Whitby Harbour will not shelter light vessels at present, 21,587. If it were made a refuge it would save both light and laden vessels, 21,588–91. If the entrance were deepened six feet it would take in light colliers, 21,594. A harbour of refuge to hold 200 laden colliers would be sufficient shelter in any gale, 21,598–600. A harbour made by piers should have an entrance both ways, 21,601, 02. 400 feet would be sufficiently wide for the entrance, 21,604–12.

Gudwood, James, Shipmaster. Whitby is the best point on the coast for a harbour of refuge, 21,619. It is the best place for a harbour both for light and laden vessels; as respects life, shelter is more wanted for laden than for light ships, 21,629. Risk experienced in running for the Tees and Whitby harbours, 21,638–44. If the existing harbours could be made safe for a ship in any weather, it would be better than making one large harbour, 21,653. Would not like to take the Tyne in a heavy swell at ebb tide, even if it were deepened to 25 feet, 21,654. If only one harbour were to be made, would prefer Filey to Hartlepool, 21,656–63. Particulars of vessels wrecked which would have been saved by a harbour at or near Whitby, 21,666–69. More lives are lost from laden than light ships, 21,675. A refuge harbour should therefore have reference particularly to laden vessels, 21,676. It is important to have two ways in and out of the harbour, 21,683, 84.

Douglas, Thomas, Pilot. Agrees generally with previous witnesses, 21.695. The uneven soundings in the neighbourhood of Whitby Rock are continuations of the rock under water, 21,700. Explanations as to soundings, 21,701–16.

Foster, Robert, Shipmaster. Agrees generally with previous witnesses, 21,721. The improvement of the existing harbours would save more life and property than one large harbour, 21,725. If there is to be a large harbour it should be at Whitby, 21,726. Prefers Filey to Hartlepool, 21,727. Many of the ships lost to the northward of Whitby have been further south, and obliged to run back, 21,729.

Pattison, William, Shipmaster. Agrees generally with former witnesses, 21,741. If there is to be but one large harbour it should be at Whitby, 21,744. But the improvement of the existing harbours would do more to save life and property, 21,745. As a site for a large harbour, prefers first Whitby, second Hartlepool, third Filey, 21,747–54.

Bedlington, Matthew, Secretary to the Robin Hood's Bay Insurance Company. The improvement of the existing harbours would not be sufficient, 21,766. If there be but one large harbour, Whitby would be a good place, 21,769. Hartlepool next best, 21,773. To make harbours at Filey and Whitby, and to improve those now existing, would tend most to the saving of life, 21,780.

Jameson, William, Shipowner, and Trustee of Pier and Harbour of Whitby. Advocates the plan of Mr. Harrison, of a breakwater on Whitby Rock, as explained to the trustees of the piers and harbours of Whitby, 21,790. Advantages of the proposed breakwater, 21,791–95. Source and amount of revenue of Whitby Harbour Trustees, 21,827–35. Items of expenditure, 21,836–45. It would not be desirable to convert the river above the bridge into a floating dock, 21,859–63. If a harbour of refuge be constructed at Whitby, it would be for the public benefit, and should be paid for by public money; voluntary subscriptions might be raised, but there are no local funds, 21,869–78. The whole revenue is used in improving the harbour; loans are resorted to whenever anything extra happens, 21,882. There are several graving docks at Whitby, but no means of repairing steam machinery to any extent, 21,886–88. The tide lights are supported by the trustees, 21,893, 94. Whitby receives no return for the money paid to Newcastle, 21,899. All the ships which come into the harbour lie aground at low water, 21,901. No local funds could be raised to meet advances from Government for improving the harbour, 21,902–07.

Pickernell, Francis, Engineer of Whitby Harbour. There is a good deal of deposit in the harbour brought down by the Esk, 21,910, 11. Also much silt upon the bar from the shore and the detritus of the cliffs, 21,912, 13. Means by which the harbour could be deepened, 21,915–25. Extent of tidal run, and rise and fall, 21,938–49. Even with present depth of entrance vessels ground at the turning of the shallows inside, 21,958. Dredging would clear it all away, 21,959. The bar to the north of the channel is formed from the beach, not from the river, 21,962. The extension of the east pier has accelerated the stream, 21,966, 67. The deposit on the west side of the bar is from the sea; on the east side there is no deposit, 21,973. The entrance of the harbour has been decreased from 290 to 150 feet, of which complaints have been made, and by which damage has been caused, 21,979–81.

Merryweather, Dr. *George*. States the facilities for constructing a harbour of refuge at Runswick Bay, as an introduction to the evidence, 21,986, 87.

Boulby, John, Engineer and Surveyor. Produces plan for a breakwater in Runswick Bay, and states the advantages of the position, 21,989. Capabilities of the stone in the neighbourhood for the works, 21,997–22,103. Works could be completed in two years, 22,020. The shore is scar generally, but sand and clay off Runswick, 22,045. The quarry whence the stone will come is less than a quarter of a mile from the commencement of the breakwater, 22,062.

Brown, Richard, Shipowner, formerly Shipmaster. Pentland Firth is a very dangerous place, 22,086. It would be a good thing to have a harbour at Wick, 22,091-100. The Tees is the best place on this coast for one large harbour of refuge, 22,104–06. But two or three smaller harbours would save more lives, 22,107. If a large harbour cannot be made at Tees Bay, Runswick Bay is next best, 22,112. A harbour at Runswick and another in the Tyne would answer all purposes, 22,115. Money would be better all spent at Hartlepool Bay than divided between that and Filey Bay, 22,117. No objection to Hartlepool on account of the shallow water and broken seas, if the breakwater were sufficiently carried out, 22,118. No advantage would be derived from a harbour at Filey to warrant the expenditure of half a million of money, 22,122. The beach at Runswick is sand, 22,125. The bay is free from rocks, except on the side, where they would be an assistance in carrying out the breakwaters, 22,130, 31. There are no funds to assist the Government expenditure for a harbour at Runswirk Bay, 22,134. Many fishermen belong to Runswick, 22,141. Vessels seldom founder at sea, 22,145. A harbour at Filey Bay could be of use only to ships caught out of the usual track in the bight of this small bay, 22,159.

Dobson, John, ex-Shipmaster. Advocates the formation of a harbour at Runswick Bay, 22,164. Its advantages; several small harbours of refuge would be better than one large scheme; the Tyne and the Wear might be improved so as to save life from shipwreck, 22,166. If only one harbour is to be made, it should be at Hartlepool, 22,174. Agrees generally with Mr. Brown's evidence, 22,177.

Clarke, William, late Harbour-master of Whitby. A refuge on this coast very necessary, but would recommend two or three rather than one large one, 22,182. If there is a large one, it should be at Filey, 22,183–88.

Pollett, Robert, Shipowner. Would prefer a harbour at each of the ports, Filey Bay, Runswick, and Hartlepool Bay, to one harbour of refuge, 22,194. Prefers Runswick, as many hundreds of lives have been saved there, 22,195.

Verrill, Richard, ex-Shipmaster. The improvement of existing harbours would do more good on this coast than one great harbour, 22,220. If there is to be one great harbour it would be of most service in Runswick Bay; the fishermen should be considered as well as the sailors, 22,223.

Wood, James, Fisherman. Runswick is a refuge for fishermen, and has saved hundreds of lives, 22,241. There should be a harbour for fishermen to run inside

of, instead of beaching their boats, 22,244. Fishermen now run their boats ashore, and save their lives, but with a pier they could save their vessels also, 22,250.

Ward, William, Fisherman. Fishermen can generally save their lives by beaching the smaller boats; they cannot beach the large boats without losing them, 22,254. These boats require the same refuge as coasters, 22,264. Runswick is a fine bay for small vessels, 22,265. The fishermen have a choice of harbours, but Runswick would be nearer their own homes, 22,267–70.

Bainbridge, Lieut. *Henry*, R.N. Commands coast-guard at Whitby; will forward observations on the evidence, 22,271–74.

WHITE, Capt. *See* BELFAST.

WHITEHEAD, JAMES. *See* NORTH SHIELDS.

WHITE, RICHARD. *See* WHITBY.

WICK (Witnesses examined at):

Mackie, John, Editor. Makes a statement respecting the trade of Wick; unless an improvement is immediately effected some great calamity will ensue, 5. Differs from statements in returns handed in by Mr. Stevenson, 8. A number of vessels wrecked in Orkney would have been saved by a harbour of refuge at Wick, 17. It is the universal opinion at Wick that Mr. Stevenson's plan would do more harm than good, 19. Capt. Vetch's plan is superior, 20–34. A harbour at Wick is preferable to the harbours in Orkney, 37. Many vessels call at Wick for orders; it is a convenient port of call, 43–49. If a harbour of refuge were at Wick, the telegraph would be extended thither, 51. Of the three plans of the proposed line of construction the largest would be preferable, 54. If the harbour of refuge were constructed there would be sufficient accommodation for many years, perhaps for ever, 56. Vessels would not enter Mr. Stevenson's harbour during heavy breakers, 61–63. Believes that Mr. Stevenson's harbour would silt up, while Captain Vetch's would not, 65.

Campbell, William, Captain; Master of a Steamer. Mr. Stevenson's plan would not enable a vessel to ride in the bay in safety, 74. If disabled, and driven to take refuge, would prefer taking Wick, to the harbours in Orkney, 94. Boats would be driven against Mr. Stevenson's pier, 98. A sailing vessel in a south-east gale could not enter Mr. Stevenson's harbour in safety, 103. She could if the other breakwaters were erected, 103, 104. Mr. Rendel's plan is a good one, and preferable to the others, 123–126. Mr. Rendel's piers would be more apt to be carried away by the stream, 140. Benefit would be obtained by having the breakwater in smooth water, and distant from the run of the tide, 141.

Sinclair, J. G. T. Corrects a statement of Mr. Stevenson before the House of Commons Harbour Committee, relative to the shipping trade, 143.

Tudor, John, Commander in H. M. Navy. Of Mr. Rendel's three plans of a harbour, the smaller harbours would be of little or no use; any harbour to be efficient must be outside the rollers of the bay; Wick is the key of the Pentland Firth, 148. Central opening of breakwater decidedly preferable, as it would prevent silt being carried into the harbour, 152, 153. Would recommend the jetty in Mr. Rendel's plan, with a slight alteration, 159. The jetty would be of no use with a straight breakwater, 160. Mr. Rendel's plan would be sufficient for the fishing trade, but not for all the trade, were it doubled, 161. With a harbour of refuge, we should compete with other ports, and raise a hardy race of seamen, 162. Objection to Mr. Stevenson's pier, 171. Capt. Vetch's plan is necessary for the protection of fishing boats and fishermen, 172. Had there been a breakwater many lives would have been saved, and fishermen not deterred from going to sea, 175–177. Would not venture to take refuge in a south-east gale in Mr. Stevenson's harbour; it would silt up; there are shifting sands which would greatly affect it, 182, 183. Present harbour incapable of improvement, 184. Breakwater should be inside the south head, and within Proudfoot, 187, 188. With one entrance there would be no difficulty, and less chance of silting, 192. Mr. Rendel's plan would hamper fishing boats and destroy valuable curing ground, 194. Tidal water does not affect the bay with silt, or but slightly, 204. Matter in the tideway driven in by gales the cause of silting the bay, 214, 215. Two openings in the breakwater would give more circulation in the bay, and prevent the deposit of silt, 213–216. The gunwale of a heavily laden boat is not more than 10 inches above the water; there is no safety at present in the bay for such, 218–220. A breakwater would have saved all the lives lost in 1848, 225.

May, Patrick, Shipmaster. Thinks there is great need of a harbour at Wick, and agrees with Capts. Campbell and Tudor's statements, 229. *See infra.*

Dunnet, James, Shipmaster. Would prefer a harbour of refuge at Wick to either Peterhead or Fraserburgh, 302. *See infra.*

Gunn, Donald, Pilot and Fisherman. There is greater loss in taking the Pentland Firth than in taking ordinary channels, 332. Many vessels which now anchor in Sinclair's Bay would come into Wick if there were shelter, 358. A breakwater would be much used, 361. In coarse weather vessels would run for Wick in preference to Orkney or Longhope, 362, 363. Would have a breakwater built at Wick, with one central entrance, 367–369. Of the two plans, would prefer Rendel's, 371.

Bruce, William, Pilot and Fisherman. A harbour of refuge at Wick would be of great advantage to the passing trade, and would save many wrecks, 386. There would be no danger in running for Wick Bay, 387. Cases in which lives might have been saved by a harbour in Wick, 395–397. The land at Wick is easy to make; there are excellent landmarks, 401–404. Many vessels would go to a harbour of refuge at Wick rather than to an open bay, such as Sinclair's Bay, 407. Prefers a central entrance, 408. North American vessels particularly would resort to Wick, 409. In a breakwater on Mr. Rendel's plan the entrance should be in the centre, 421. Centre most suitable for fishing boats, 422. *See infra.*

Steven, William, Pilot. Foreign traffic has fallen off, but coasting trade has risen, in the Pentland Firth, 427.

Sutherland, John, Fisherman. A breakwater in the bay would have prevented losses, 440. There is no safety in Broadhaven, 442, 451. The Broadhaven boats have run to Wick for safety, 445. A laden boat has her gunwale about a foot above water; there is great danger in rough weather, 446, 447.

Bruce, James, Fisherman. Prefers central entrance in breakwater across the bay, 459. More than 100 boats lost in the gale in 1848, 466.

May, Patrick (re-examined). Wick preferable to Peterhead as a site for a harbour of refuge, 470. Cromarty as a place of shelter is as serviceable to Peterhead as to Wick, 475. Cromarty could be taken at all times in safety, 484. Pentland Firth is considered by seamen the worst part of the sea in the whole kingdom, 488. Longhope is a safe anchorage in blowing weather; there is good holding ground, 502, 503. Widewall is not a good harbour, 505. Harbours of refuge in Orkney difficult of access, 510. A large number of vessels take refuge at Longhope, 511.

Dunnet, James (re-examined). Prefers Wick to Peterhead as a site for a harbour of refuge near the Pentland Firth, 513. Cromarty is more serviceable as a place of refuge to Peterhead than to Wick, 517.

Bruce, William (re-examined). Vessels that take Longhope for shelter do not lie in safety, 537–539. Panhope is a small harbour, and little resorted to; Widewall Bay gives no safety; Stromness is difficult of access; and places where vessels wait the tide, but not available as harbours of refuge, 541–544. Instances in which ships and lives might have been saved by a harbour of refuge, 545–550. Deer Ness Harbour is out of our track, 551. Kirkwall Harbour is affected by shoals and tides, 552. There is good holding ground in Gills Bay, but few vessels enter it, 554–557. Brough is useless, except in calm weather, 558. Thurso Bay is a good roadstead and a great refuge, 560.

WILLIAMS, J. CROFT. *See* CARDIFF.

WILLIAMS, JOSHUA. *See* BIDEFORD.

WILLIAMS, PETER. *See* CARDIFF.

WILLIAMSON, GEORGE. *See* BRIDLINGTON.

WILSON, JOHN. *See* BRIDLINGTON.

WILSON, JOSHUA. *See* SUNDERLAND.

WINCHESTER, JOHN. *See* PETERHEAD.

WOOD, JAMES. *See* WHITBY.

WOOD, NICHOLAS. *See* SUNDERLAND.

WOODHOUSE, THOMAS. *See* BRIDLINGTON.

WYRILL, HENRY. *See* BRIDLINGTON.

YEO, RICHARD. *See* PETERHEAD.

YEO, WILLIAM. *See* BIDEFORD.

YOUNG, WILLIAM. *See* PETERHEAD.

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